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*Hon Mr Taggart*

**ROYAL COMMISSION**

**ON**

**TRANSPORTATION**

**HEARINGS**

HELD AT

**OTTAWA**

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I N D E X

Page No.

EDWARDS, Ford K.

Cross-examination

By Mr. Frawley (Cont'd)

12880

By Mr. Cumming

12904

---

NO EXHIBITS IN THIS VOLUME

---

E R R A T A

VOLUME 72

Page 12802 Line 8: Delete "ultimate"  
Substitute "alternate"

Line 10 Delete "capital"  
Substitute "captive"

---







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TORONTO, ONTARIO

ROYAL COMMISSION ON TRANSPORTATION

Proceedings of hearings held in  
the Court Room, Board of Transport  
Commissioners Offices, Ottawa,  
Ontario, on the 1st day of  
June, 1960

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24	<u>VOLUME 73</u>		ERRATA	
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			of	
27	12928	11	increase	decrease
28	12929	19	or some mills	or so mills
29	12937	12	big or large	small or large
30		13-14	"	"









Ottawa, Ontario,  
Wednesday,  
June 1, 1960

---On commencing at 10.00 a.m.

THE CHAIRMAN: Mr. Frawley?

CROSS-EXAMINATION BY MR. FRAWLEY (Cont'd):

Q. Dr. Edwards, last evening when we closed, when we adjourned, you were telling me that what I had read to you from page 25 of the ICC Cost Section Statement No. 6-58 was not costing procedure; is that right?

A. That is the burden study you are talking about? I don't have that statement, but I take it it is the burden study.

Q. Yes. It is called "Distribution of the Rail Revenue Contribution by Commodity Groups -- 1956." Prepared by the Cost Finding Section, and I am told it is commonly referred to as the burden study, and I asked you yesterday, I read to you yesterday a piece, a paragraph on page 25 of that statement in which reference was made to the fact that -- and I will read this one sentence:

'The constant portion of the return at 4 per cent on the road property was adjusted to correct rate of return to the actual rate of return earned in 1956 by the railroads.'

And you told me then that that was not done pursuant to cost finding procedures. Did you mean to tell me that, or did I incorrectly understand what you said?









1           A.    Well, I will have to explain my statement,  
2 Mr. Frawley.   What I meant is that in costing out  
3 traffic, in allowing for the cost of capital, you use  
4 a figure which you feel is representative of the cost of  
5 capital, and in this case here, in treating with the  
6 burden study, the effort was to reflect the actual con-  
7 tribution, whatever rate of return overall that might  
8 yield to the carriers, in order that the expense side  
9 would be brought in balance with the revenue side,  
10 whatever those revenues might yield.       Now, in making  
11 cost studies it's not practical to turn to the carriers'  
12 earnings, some of which may be down around 1 or 2 per cent,  
13 and use that as the cost of money.       But in the burden  
14 studies, when you are reconciling total revenues with  
15 total operating expenses, plus whatever contribution  
16 there was towards the cost of money, then you have  
17 to reduce the expense side of the equation to whatever  
18 was yielded in the period of the study so that the  
19 ratio, the dead-centre level, as it has been referred  
20 to, of the ratio of total revenues to total fully dis-  
21 tributed costs will be brought into balance at index 100.

22           Q.    Now, Dr. Edwards ---

23           A.    If the adjustment isn't perfect, as I  
24 explained, I believe, in this statement, the index might  
25 be a fraction or slightly above index 100, such as index  
26 101 in 1957, due to failure to make full adjustment for  
27 all the factors at work in connection with the deficits  
28 and other items.

29           Q.    Now, Dr. Edwards, I put it to you that the  
30







1  
2 preparation of what is called the burden study and the  
3 preparation of the document which has been referred to  
4 here as 4-54 that we were discussing are all dovetailed  
5 together and are all the productions of the Cost Section  
6 of the ICC. There is no doubt about that?

7 A. No, there is no doubt about that.

8 Q. And there are not two cost systems; there  
9 is only one cost system in the ICC, is there not, being  
10 Rail Form A, basically?

11 A. There is a cost system which is made in  
12 costing traffic based on cost of money, and there is an  
13 analysis or a distribution of the contribution based on  
14 the actual contribution received which is reconciled  
15 with whatever the carriers were earning in the given  
16 period.

17 Q. All right. Now, just so that there is  
18 no mistake about it, I would like to return to page 1 of  
19 this statement 6-58, which is the introduction, and I  
20 want to put on the record in this same context the  
21 third paragraph, which reads:

22 "The out-of-pocket costs for 1956 are  
23 based on the cost data underlying the carload  
24 costs shown in the Bureau of Accounts,  
25 Cost Finding and Valuation Statement No.  
26 2-58. Such out-of-pocket costs represent  
27 those expenses which, over the long-term  
28 period, are variable with volume of traffic  
29 handled." --

30 and then there follows footnote 3. I will read







1  
2 footnote 3:

3 "The out-of-pocket costs are computed at  
4 80 per cent of the operating expenses, rents  
5 and taxes. They also include an allowance  
6 for return at 4 per cent on 50 per cent of  
7 the road property and on 100 per cent of the  
8 equipment, i.e., on approximately 65 per cent  
9 of the total property. The allowance for  
10 return including the allowance for Federal  
11 income taxes amounted to about 15 per cent  
12 of the out-of-pocket costs in 1956.

13 "For details of treatment, see Bureau of  
14 Accounts, Costing Finding and the Valuation  
15 Statement No. 4-54, pages 27 to 87, inclusive,  
16 and Senate Document No. 63, 78th Congress,  
17 1st Session, pages 41 to 74, inclusive."

18 There isn't any doubt about that, that there  
19 is a close interrelation and connection between the  
20 statement which is called 4-54 and what is called the  
21 burden study and the one I have here, being 6-58.  
22 There is no doubt about that?

23 A. No, there is no doubt about the close  
24 relationship. But in arriving at the total costs, if  
25 the carriers earn  $3\frac{1}{2}$  per cent, the total costs are  
26 adjusted to  $3\frac{1}{2}$  per cent.

27 Q. Now, there is another document, ICC  
28 document, I want to put before you, Dr. Edwards, and  
29 that is the one called "Rail Carload Cost Scales by  
30 Territories for the Year 1957," and it is statement







1  
2 No. 5-58, Washington, November, 1958, and this I want  
3 to read to you from page 3, Item 3, headed "Treatment  
4 of the out-of-pocket and constant costs."

5 "The out-of-pocket costs shown in the  
6 study reflect the costs which, over the long-  
7 run period, and at the average postwar density  
8 of traffic, have been found to be variable  
9 with traffic changes. They include 80 per  
10 cent . . ."

11 And before I continue to read, the footnote there refers  
12 one to Senate Document No. 63 and to Cost Section State-  
13 ment No. 4-54, and continuing on to read from page 3 of  
14 Statement 5-58:

15 "They include 80 per cent of the operating  
16 expenses, rents and taxes (excluding Federal  
17 income taxes) plus a return of 4 per cent after  
18 federal income taxes on 50 per cent of the  
19 road property and 100 per cent of the equipment.  
20 The allowance for return represents that portion  
21 of the plant which, over the long-run period,  
22 has been found to be variable with traffic  
23 volume. The figure of 4 per cent was used  
24 as it approximates the long-run average return  
25 realized by the carriers. For shipments of  
26 about the average weight load and average  
27 length of haul, the elimination of the allowance  
28 for return from the out-of-pocket costs would  
29 reduce the figures in Table 1 by the following  
30 percentages: Eastern district, 13 per cent;







1 Pocahontas region, 14 per cent; Southern region,  
2 15 per cent; and Western district, 16 per cent,  
3 respectively. For the hauls which are sub-  
4 stantially shorter than average (i.e., 200  
5 miles and less) the figures would be approximately  
6 one percentage point less and for hauls that  
7 are substantially longer than average (i.e.,  
8 1000 miles and over) the figures would be  
9 approximately one percentage point more.  
10

11 "The fully distributed costs include,  
12 in addition to the out-of-pocket costs as  
13 described above, all remaining revenue needs  
14 necessary to permit the carriers to cover  
15 the remaining 20 per cent of the operating  
16 expenses, rents and taxes, the passenger-  
17 train and less-carload operating deficits  
18 and a return of 4 per cent after Federal  
19 income taxes on the property as a whole.  
20 These revenue needs over and above the  
21 out-of-pocket costs were given a prorata  
22 ton and ton-mile distribution over all revenue  
23 traffic, without distinction as to kind or  
24 class. In effect, the fully distributed  
25 costs, as thus computed, consist of the out-  
26 of-pocket costs plus an allowance which  
27 closely approximates the weighted average  
28 contribution per net ton mile made by all  
29 rail traffic to the constant costs or over-  
30 head burden."







1  
2 A. What is the statement? What was that  
3 last statement there? What document?

4 Q. It is statement 5-58. It is called  
5 "Interstate Commerce Commission, Bureau of Accounts,  
6 Cost Finding and Valuation. Rail Carload Cost  
7 Scales by Territories for the Year 1957."

8 A. Yes, I have identified the document.

9 Q. I simply put it to you, Dr. Edwards,  
10 that both in what you call the burden study and what is  
11 called "Railroad Cost Scales," both prepared by the  
12 Cost Section, we find that reference is made to rate  
13 of return, or, as the statement 4-54 evaluates it, as  
14 being equal to and meaning the same thing as cost of  
15 capital. You will find from what I read yesterday  
16 that that is one good reason for having put it into  
17 the record yesterday, because on page 12867 of  
18 yesterday's transcript where I was reading from page 111  
19 of Cost Statement 4-54, the paragraph starts:

20 "The matter of the rates of return is  
21 left open in the formula, the following explana-  
22 tory statement being made (see unit cost sheet  
23 1,2/): "The rate of return (i.e., allowance  
24 for cost of capital) is presumed to be that  
25 which is necessary to attract capital to the  
26 rail industry."

27 Now, I simply put it to you, Dr. Edwards,  
28 that when you look at both the burden study and the  
29 Cost Section's study statement 4-54 and the statement  
30 I have in front of me, 5-58, Rail Carload Cost Scales,







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Edwards, cr-ex  
(Frawley)

12887

1  
2 you find all reference to the effect that the cost of  
3 capital is the allowance for the rate of return and  
4 the figure is used so that it approximates the long-  
5 run average return realized by the carriers, and that  
6 is what I put to you as being the ICC treatment before  
7 determining cost of capital in costing the movement of  
8 any particular traffic.  
9  
10  
11  
12

13 (Page 12889 follows)  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30





1  
2 The use of the factor of 4 per cent in these  
3 burden studies and in these cost studies was a decision  
4 that I made myself years ago when these studies were  
5 started in the early 40's. The ICC stated, when it  
6 referred to the ~~rate of~~ return, return of cost of  
7 capital -- the only pronouncement it has made even  
8 in terms of 6 per cent or 5-3/4 per cent return. So  
9 I think that is the pronouncement as to cost of capital  
10 by the Interstate Commerce Commission itself.

11 In setting up these studies for the purposes  
12 of analyzing the contributions of the various classes  
13 of traffic, in setting up these scales I noted at the  
14 period that we were working with -- and it was a product  
15 of the late depression period of the 30's -- that the car-  
16 riers had had a low rate of return, and averaging back  
17 into the 20's they had had higher return up to 5,  
18 possibly 6 per cent, and in the 30's they dropped to 2  
19 or 3 per cent, with many of them on the verge of bank-  
20 ruptcy.

21 I looked over a long-range period of years  
22 and picked 4 per cent as a factor which would reflect  
23 about their earning power over a period of prosperity  
24 and a period of recession.

25 Now, when it came to applying the cost of  
26 capital, we never conceived of that as being the cost  
27 of capital, because the cost of capital is the amount  
28 required to satisfy the investor and attract his invest-  
29 ments.

30 Q. That is what the statement says, Dr. Edwards.







1 Those are the very words the statement says.

2 A. Well, you are asking me to explain the basis  
3 of this.

4 Q. Yes, that is right.

5 A. Well, let me continue here.

6 Q. I am asking you --

7 A. Well, you gave a long statement and you ended  
8 with this lift in your voice and looked at me. I am  
9 now giving my answer to your long statement.

10 Q. Now, Dr. Edwards, I do not see any need for  
11 recrimination or any finger-pointing. Are you annoyed  
12 with me?

13 A. Yes, I am annoyed with you. Now you broke  
14 me off, changed my train of thought. You have read  
15 to me a long list of quotations and then ask me to  
16 comment upon them.

17 Q. That is right.

18 A. Now I am commenting and I am not through  
19 commenting.

20 Q. It is too bad, I did not think we had got  
21 to the point that you were annoyed with me, that is  
22 all, doctor.

23 A. Well, I am always annoyed with lawyers that  
24 cut me off in the middle of a sentence, but, however,  
25 aside from that I did not mean to be annoyed.

26 THE CHAIRMAN: Well, good relations are  
27 restored.

28 THE WITNESS: Yes, I am sure. When it came  
29 to setting up the Rail Form A which is the basis for  
30 the costing, the per cent of return is left open, and







1 that has to be determined in the application of those  
2 Commission formulas with the amount to be inserted  
3 by the party making the study, based upon their  
4 determination of the cost of capital.

5 Now, these low rates of return do not re-  
6 flect the cost of capital to attract an investor.  
7 These low rates of return are commensurate with the  
8 securities of the carrier being sold on the market far  
9 below their book value. The equity may be less than  
10 50 per cent of the book value of the carriers as  
11 a result of this low rate of return.

12 I am satisfied from studies I have made that  
13 the cost of capital in the market to attract the  
14 composite financial structure, whether it is bond,  
15 preferred stock and equity capital, in the proportions  
16 in which they are found in the average American road,  
17 is very substantially in excess or significantly in  
18 excess of 6 per cent; and when making studies recently,  
19 and in our Divisions case we have used the factor of  
20 a 6 per cent cost of capital.

21 Now, it has been pointed out, been made  
22 obvious by the statements in the last two days, some  
23 traffic yields small amounts above out-of-pocket cost;  
24 some traffic yields amounts that are close to fully  
25 distributed cost; and some traffic moves above.

26 So that the end product of the carrier problem  
27 of handling the traffic at a wide range relationships  
28 to fully distributed costs and at various levels above  
29 out-of-pocket costs will result in a rate of return  
30





1 based upon the earning power of what it is handling  
2 and its distribution and the compensatory character of  
3 those rates.

4 Now, that produces rates of return for  
5 roads that may vary from 1 per cent up to 8 or 9 per  
6 cent return, but the cost of money or cost of attract-  
7 ing the investment and maintaining the integrity of that  
8 investment and of the financial standing of the  
9 carrier, does not fluctuate from 1 to 9 per cent  
10 but is an independent factor just like the cost of  
11 fuel and that is, I am satisfied, in excess of 6 per  
12 cent.

13 MR. FRAWLEY: Q. Now, I am still discussing  
14 with you this rail carload cost scales statement 5-58,  
15 and I want to call your attention, if you have a copy  
16 of that -- you have'nt got a copy but I suppose you  
17 are quite familiar with it?

18 A. Yes, I was sure I had a copy of that. I  
19 cannot put my hands on it.

20 Q. I will give you this if you want to look  
21 at it after I have put this to you. In reading this  
22 to you a few moments ago I read a paragraph which ended  
23 with the sentence on page 3 of this document:

24 " In effect, the fully distributed costs, as  
25 thus computed consist of the out-of-pocket  
26 costs plus an allowance which closely approxi-  
27 mates the weighted average contribution per net  
28 ton-mile made by all rail traffic to the constant  
29 costs or overhead burden."  
30







1 Then there is a footnote following that and  
2 I would like to read you the footnote immediately  
3 following what I have just read from the statement.  
4 Footnote 1 reads:

5  
6 " As indicated in the Bureau's statement  
7 No. 5-57 entitled Distribution of the Rail  
8 Revenue Contributions by Commodity Groups --1955,  
9 low-grade volume-moving traffic commonly make  
10 a per-ton-mile contribution to the overhead  
11 burden which is less than the weighted average  
12 for all traffic. On the other hand, the higher-  
13 grade manufactured products commonly make a per-  
14 ton-mile contribution which is higher than the  
15 average. The rate of return used in the study  
16 (4 per cent) was based on the long-run return  
17 experienced by the carriers."

18 I take it from the ~~that both in the~~ burden  
19 study and in the rail carload cost scales, that they  
20 are endeavouring to determine the cost of money, they  
21 go to the rate of return, and when they use 4 per  
22 cent they say that is based on the long-run return  
23 experienced by the carrier. Is that not so?

24 A. No, that is not the cost of money and  
25 the cost of capital.

26 Q. The ICC says so, its own words on page 111  
27 of statement 4-54, do they not?

28 A. Well, as I have stated, the rate the  
29 carrier earns as a result of its market situation at a  
30 given time is no indication of what it takes to







1 attract the investor to come in and put his money into  
2 the enterprise.

3 Q. That may be true, Dr. Edwards, but I am  
4 talking about how the ICC looks at it. I would like  
5 your comment on one paragraph which is a paragraph  
6 devoted entirely to allowance.

7 A. You say how the ICC looks at it. That docu-  
8 ment carries on the front page a statement, I am sure,  
9 which states:

10  
11 " This study, issued as information, has  
12 not been adopted by the Interstate Commerce  
13 Commission."

14 That is the men of the cost section speaking  
15 there.

16 Q. That is right. I will correct that. I am  
17 quite satisfied to take it as what the cost section  
18 of the ICC says.

19 Now, let me read you page 4 of this same  
20 document 5-58 which has a separate paragraph numbered  
21 4 and the heading is "Allowance for Return on Road  
22 Property and Equipment."

23 " The allowance for return is based upon the  
24 original cost of the road property and equipment  
25 including an allowance for working capital,  
26 material and supplies plus the present value of  
27 land and rights, less book depreciation on  
28 total depreciable property, book amortization on  
29 road property and an estimated normal reserve on  
30 amortized equipment in lieu of the book figures





" The allowances for return are after payment of Federal income taxes computed at a rate of 52 per cent on the rate of return (4 per cent) which is applicable for costs based on the year 1957 (Tables 1, 2, and 3)."

Now, I put it to you, Dr. Edwards, that when they are talking about the allowances for return they are looking for the item of expense to include as an item of expense, the said expense being the cost of capital. Is that not correct?

A. They were trying to, they were putting in there a rate of return close to what the carriers were earning, but that is not the cost of capital.

Q. Well, Dr. Edwards, my question was -- and I would really like an answer to it if you can give it to me --

MR. SINCLAIR: He has answered it five times.

MR. FRAWLEY: Now, please, sir, this is no time, if I may say so with great respect, for these gratuitous suggestions by my friend Mr. Sinclair.

THE CHAIRMAN: Go ahead Mr. Frawley.

MR. FRAWLEY: Mr. Sinclair having lived with this thing, he may know all about it, and I make no apologies for finding it somewhat difficult, and if my friend would show me just a little bit of courtesy in endeavouring to do a very difficult job, I would appreciate it.

Q. Dr. Edwards, my question to you, and I tried to frame it rather carefully, when the cost section people were using 4 per cent and were calling it the







1 allowance for return, they were endeavouring to find  
2 the amount which they would write in in their cost  
3 formula as an expense item for the cost of capital.  
4 That is my question, and I say is that not what they  
5 were doing in the cost section -- whether it is right  
6 or not right -- is that not what they were doing,  
7 doctor?

8 A. They were putting in a rate of return  
9 historically approximating what had been earned as  
10 I previously described.

11 Q. Why were they doing it?

12 A. But they did not put -- the cost section  
13 when it releases these rail form A's by the hundreds  
14 for use throughout by parties making their own  
15 cost studies, leave it open for the party applying  
16 the study to determine its cost of money and to use  
17 a figure accordingly.

18 Q. All right.

19 A. Now, these other studies were tied back to  
20 the use, reflecting the earning power of the railroads  
21 over the 20's and the 30's, and were made having in  
22 mind also their utilization in the burden studies  
23 which I have outlined; but that we never appreciated  
24 that we were setting by that the cost of money because--

25 Q. All right. Now, Dr. Edwards, as I understand  
26 it it is perfectly proper and right that there should  
27 be put down in the variable costs something as an  
28 expense for the cost of capital. That is a proper  
29 statement, is it not?

30 A. Yes sir.







1 Q. All right, also a portion of it in the  
2 constant cost, as I understand it?

3 A. Yes sir.

4 Q. Now, starting from that, when the cost  
5 section set out to determine the cost -- because,  
6 after all, this appendix A that we talked about yester-  
7 day, Exhibit 141, that is the ICC's determination  
8 of the cost of moving these various traffics, and  
9 then having arrived at the cost they determine  
10 the contributions to either overhead or to variable  
11 costs.  
12  
13  
14  
15  
16  
17  
18  
19  
20

21 (Page 12899 follows)  
22  
23  
24  
25  
26  
27  
28  
29  
30





1           A.    That is the Cost Section statistical  
2 determination in the ICC.

3           Q.    That is the Cost Section statistical  
4 determination in the ICC?

5           A.    Yes; and the ICC, when talking about the  
6 cost of money, used figures of 6 per cent and 5-3/4 per  
7 cent.

8                   It has never, to my knowledge, ever used a  
9 figure of 4 per cent as representing the cost of money  
10 in any of its decisions.

11           Q.    But the 4 per cent, by whomever it was  
12 used -- the 4 per cent adjusted down to the actual  
13 experience of the carrier involved -- that 4 per cent  
14 was used to determine the amount to go in as an expense  
15 for cost of capital?

16           A.    It is used to reflect what, in its  
17 totality, for all traffic and considering passenger and  
18 LCL deficits, the carriers were realizing over that  
19 period of time.

20           Q.    But having determined what they were  
21 realizing they brought it back and worked it out as an  
22 item of expense to be allowed to the cost of capital --  
23 as a proper item to go in?

24           A.    I cannot add anything more.    It was  
25 never visualized as the cost of going out and getting  
26 capital.

27           Q.    Well, I don't know what that means.    If  
28 you had projected yourself into 1960 . . .

29           A.    Well, I am speaking, from my experience in  
30







1 the Cost Section, as to what Mr. Towne visualizes as  
2 being the situation. You would have to ask him, I  
3 guess.

4 THE CHAIRMAN: I think you have both made your  
5 points, Mr. Frawley.

6 MR. FRAWLEY: Q. I believe, finally, that  
7 it isn't used for anything else than to determine the  
8 item of expense for cost of capital? It isn't used  
9 for anything else, is it?

10 A. It is to reflect the rate of return  
11 being determined in the totality, because 4 per cent  
12 is not the cost of capital.

13 Q. But ultimately?

14 A. And it . . .

15 THE CHAIRMAN: You have both made your point.

16 MR. FRAWLEY: Q. Now, I have one more  
17 matter that I would like to ask you about, and that is  
18 I would like to take you to your statement to the  
19 University in Washington on January 21st, 1953; and I  
20 would like you to go to page 17 of that document . . .

21 MR. FRAWLEY: Mr. Chairman, I have been  
22 making so much use of this document that it seems to me  
23 that I should probably go to the extra expense of  
24 reproducing it. I only reproduced the appendix which  
25 is now Exhibit 141. Certainly I could make two or  
26 three copies available to the Commission and its staff,  
27 and it would not be necessary to file it as an exhibit.

28 Q. I want to call your attention, Dr.  
29 Edwards, to what you said on page 17 -- the last two  
30





1  
2 paragraphs -- and I will read it to you:

3 "The concept of fully distributed costs  
4 has been shown to serve a limited purpose in  
5 appraising the nature and extent of the differ-  
6 ential pricing that has gone into the making  
7 of particular rates or rate structures.  
8 Other figures bearing on 'contribution', and  
9 made possible by a knowledge of the out-of-  
10 pocket costs, serve to gauge the profitability  
11 of single carload movements, rate structures,  
12 or the movements by classes of commodities.  
13 These 'contribution' studies provide, in  
14 effect, an approximate 'profit and loss'  
15 statement by individual classes of traffic,  
16 thereby assisting greatly in an understanding  
17 and comprehension of the broad subject matter  
18 of burden distribution and differential  
19 pricing.

20 "In closing this paper I should like to  
21 say a word in commendation for the vigor with  
22 which the Interstate Commerce Commission,  
23 despite budget difficulties, has consistently  
24 pursued and advanced this whole matter of costs  
25 and the highly interrelated waybill study  
26 work. In my opinion this whole program  
27 has contributed more to the factual explana-  
28 tion, rationalization and understanding of  
29 railroad pricing than anything that has ever  
30 been done heretofore."







1 Is that still your opinion, Dr. Edwards?

2 A. Yes.

3 MR. FRAWLEY: Thank you very much.

4 THE CHAIRMAN: Are you finished, Mr. Frawley?

5 MR. FRAWLEY: Yes, I am finished.

6 THE CHAIRMAN: Mr. Hume?

7 MR. HUME: I have no questions, thank you,  
8 sir.

9 THE CHAIRMAN: Is Mr. Brazier around?

10 MR. SINCLAIR: I will find him.

11 MR. FRAWLEY: If he was around he would be  
12 around!

13 MR. SINCLAIR: I think Mr. Brazier expected  
14 Mr. Frawley to be a little longer. He may not be  
15 asking any questions.

16 Perhaps we could have a break here.

17 THE CHAIRMAN: Yes.

18 ---Short recess.

19 THE CHAIRMAN: Order, please.

20 MR. CUMMING: I understand, Mr. Chairman . . .

21 COMMISSIONER ANSCOMB: Could I ask Dr. Edwards  
22 a question?

23 THE CHAIRMAN: Yes.

24 BY COMMISSIONER ANSCOMB:

25 Q. I wonder if you would mind? I am going  
26 to use the word "clearing" this for me? So far as I  
27 understand it does not need clearing, but this morning  
28 you had a long dissertation with Mr. Frawley on this  
29  
30





1 rate of return.

2  
3 I want to ask you, in very few words -- and  
4 I don't need a long dissertation in reply either -- I  
5 want to ask you if you agree that the rate of return  
6 -- never mind whether the ICC or the IWW or anybody  
7 else has used it in arriving at a cost basis -- I  
8 simply say to you: The rate of return has nothing  
9 whatever to do with the cost of money. Is that  
10 right, or isn't it?

11 A. That is right.

12 Q. Thank you.

13 MR. FRAWLEY: But the ICC regarded it as  
14 just that.

15 MR. SINCLAIR: Order!

16 MR. FRAWLEY: I am sure Commissioner  
17 Anscomb understands that. They may be right, or  
18 they may be wrong, but that is what they do and their  
19 documents show that.

20 THE CHAIRMAN: I think the point is made on  
21 the record.

22 MR. SINCLAIR: It is made on the record, and  
23 I certainly disagree with Mr. Frawley; but we can argue  
24 on that.

25 THE CHAIRMAN: There is one correction in  
26 the record that I would like to make. Yesterday, at  
27 page 12874 I am quoted as saying "That is hardly  
28 likely." What I intended to have reported was:  
29 "That is hardly like to like."

30 Mr. Brazier, I understand, has no questions;







1 and Mr. Doherty advises me that he has none.

2 MR. CUMMING: So I understand.

3 THE CHAIRMAN: Mr. Cumming?

4  
5 CROSS-EXAMINATION BY MR. CUMMING:

6 Q. I am not going to get into the  
7 Southern Governor's Case or the burden study with you,  
8 and I will try not even to raise my voice, but there  
9 are a number of things that I would like to discuss  
10 with you.

11 On Monday, Dr. Edwards, in answer to a  
12 question, or a comment, from the Chairman you said to  
13 him something to the effect that the value of service  
14 could not be disregarded in making any rate. Do you  
15 recall making that statement?

16 A. Yes.

17 Q. And as I understand the discussions  
18 that have been going on it seems to be pretty well  
19 common ground that any rate must cover at least variable  
20 cost?

21 A. Yes.

22 Q. That is what you would consider to be  
23 the floor?

24 A. Yes.

25 Q. And the area of controversy, or, perhaps,  
26 I might more properly describe it as the area of  
27 difficulty, is the amount that a rate maker can charge  
28 in excess of that, either up to fully distributed cost  
29 or, perhaps, even in excess of fully distributed cost.  
30 That is the problem that the rate maker has?





1 A. That is right.

2 Q. And as you have described it, in making  
3 rates regard must be had to the whole fasciculus  
4 of factors -- cost, loading characteristics, competitive  
5 considerations, place in the hierarchy, and all those  
6 things?

7 A. That is right.

8 Q. And included in those factors to which  
9 regard is had by the rate maker is this question of  
10 ability to pay?

11 A. Yes; the "ability to pay" has been very  
12 loosely used in this context . . .

13 Q. I appreciate that.

14 A. I will stop there.

15 Q. Before we go any further I was going to  
16 ask you to be good enough to define for us these terms  
17 that have been talked about so much -- value of service,  
18 ability to pay and elasticity of demand for transpor-  
19 tation service?

20 A. Well, I am starting out with the thought  
21 that they have probably been used interchangeably, but  
22 elasticity of demand for transportation by the carrier  
23 with whom we are dealing is the terms in which I am  
24 thinking.

25 Now, elasticity of demand for shoes shipped by  
26 rail, thinking in terms of elasticity of demand by  
27 buyers of shoes, it is a question of elasticity of the  
28 demand applicable to shoes relating to the purchase of  
29 the transportation by rail, if we are dealing with rail.  
30







1  
2 Now, because it is the effect of the rates on the  
3 movement of traffic over the lines of the type of  
4 carrier, or individual carrier, we are dealing with,  
5 it is one of the critical factors in rate making.  
6 Behind that elasticity of demand there is, too, the  
7 consumption of the commodity itself and whether it  
8 would be discouraged by higher or lower rates, which  
9 is part of the picture -- it is certainly true for  
10 coal, as I have indicated.

11 That elasticity of demand -- I am trying to  
12 bring my thoughts together on this -- has, in a sense,  
13 two definitions, or people use the term in two senses.  
14 First, the elasticity of the demand for transportation  
15 by the carrier with whom one is working . . .

16 Q. Before you go on, that is the important  
17 elasticity factor that the rate maker has regard to?

18 A. That is a key factor. I find I am  
19 tempted to say "the" key factor; but there is the other  
20 factor that if the demand has very high inelasticity  
21 the sky isn't the limit; you have got to have reasonable  
22 rate relationships. So that I would just mention that . . .

23 Q. I appreciate that because what I had in  
24 mind when I said that is the key elasticity of demand I  
25 meant as distinguished from the market elasticity of  
26 demand for shoes, the ultimate cost of which may reflect  
27 some transportation charge?

28 A. Yes.  
29  
30





1 Q. Did I interrupt you, Dr. Edwards? Have you  
2 something further to say?

3 A. Well, a factor behind this elasticity of  
4 demand for transportation by rail is, of course, the  
5 general market elasticity of demand, but it is the  
6 first I put the emphasis on, although the second is  
7 a factor to be considered.

8 Q. When you use the term "ability to pay", and  
9 as you were using it in your discussions with Mr. Mauro,  
10 can we take it you were using that expression in the  
11 same sense or interchangeably with the term "elasticity  
12 of demand for transportation service"?

13 A. Yes; for a sharp definition of terms, I  
14 think the two would be interchangeable.

15 Q. Then, it is not in the sense that you were  
16 using it designed as a measure of, what I may say,  
17 would be the economic social situation of any parti-  
18 cular group in the community?

19 A. No, I don't think so. You are thinking of  
20 my use of the term?

21 Q. Yes.

22 A. Yes, that is right.

23 Q. Because the term is used by economists in  
24 considering, for instance, taxation problems-- the  
25 ability to pay as it relates to the whole general  
26 question of taxation. Is the term used in a different  
27 sense than the expression "ability to pay" as you  
28 were using it with regard to transportation problems?

29 A. Yes. To illustrate, I think I used the  
30 term as a peanut vendor would use it in deciding how







1 many bags he would sell at 5 cents or 10 cents. He  
2 doesn't go into the sociological conditions of the  
3 buyer of the peanuts. He is only interested in the  
4 number of bags he moves at various prices.

5 THE CHAIRMAN: Before you leave that,  
6 Mr. Cumming, you might follow up with value of service.

7 MR. CUMMING: Oh yes, I am sorry.

8 Q. I had asked you if, along with these terms,  
9 we could have your definition of "value of service"  
10 as well?

11 A. Well, I think of value of service as being  
12 the entire complex of factors at work. One of the  
13 problems in rate-making is that, unlike the little  
14 peanut vendor, he can't experiment day by day and see  
15 how many bags he sells at 5, 7 or 2 for 15. A  
16 regulatory agency, such as the Interstate Commerce  
17 Commission, or even the traffic manager of a railroad,  
18 can't put in a whole series of rates and change them  
19 monthly to determine the elasticity of demand. He  
20 has to make a market analysis and appraise the factors.  
21 When you talk of value of service, I think that brings  
22 in broadly all the considerations, but I am not sure  
23 that it brings in sociological considerations, except  
24 that they may affect the movement of the traffic. At  
25 various times there has been a listing of these  
26 factors: the value of the article, the ability of the  
27 article to move by other forms of transportation, its  
28 rate relationships to other traffic or like traffic;  
29 they all enter into the picture. It is the whole  
30





1 complex of economic considerations.

2 Q. It is perhaps the broad generic term, and  
3 these two other expressions, "ability to pay" and  
4 "elasticity of demand for transportation service" which  
5 I take it are used interchangeably, form a part,  
6 however important, of the value of service principle  
7 that you are talking about?

8 A. Yes, the elasticity of demand, you might say,  
9 is the delicate tool that conceptually you work with  
10 in setting rates. For example, in setting rates on  
11 coal I am quite sure that long hours of determinations  
12 have been made on both sides -- both shippers and  
13 carriers -- in arriving at rates which will, to the  
14 carriers, yield maximum contribution to their revenue  
15 needs. I am sure large coal-carrying roads which earn  
16 anywhere from  $2\frac{1}{2}$  to 9 per cent have one factor in  
17 mind: what will maximize their contribution toward  
18 their required revenue needs? When they themselves,  
19 as some of them are, such as Pennsylvania and B. and O.  
20 at the present time, are experiencing certainly lower  
21 rates of return -- well below their costs of capital --  
22 they are necessarily under pressure to find that  
23 level. The coal industry has tried to arrive at  
24 value of service determinates, and I have put in a  
25 great deal of testimony about value of rail service  
26 to coal, which leads me off into an analysis of the  
27 potentialities of substitution of other fuels for  
28 coal, and I have referred to it as a value of service  
29 element. The threat of foreign oil, the impact of  
30 the gas pipe lines, and the dumping policies of the







1 long distance lines have all been evaluated. So,  
2 those get into the broad factors which really, I  
3 suppose, constitute a market analysis in the long-run  
4 of what will be the effect of certain <sup>projected</sup> rate/increases  
5 on the movement of coal; or, to the contrary, what  
6 would be the effect on volume if the coal rates were  
7 changed -- increased or decreased. The carriers make  
8 upward or downward adjustments on the situation you  
9 find in various areas.

10 COMMISSIONER MANN: Dr. Edwards, there was  
11 an exhaustive discussion in D.P. Locklin's "Economics  
12 of Transportation" about the value of service concept.  
13 Do you think this generally sets out what you would  
14 say if you were asked to discuss value of service?

15 THE WITNESS: Yes, I think his writings on  
16 rail transportation economics are about the best that  
17 have ever been written. I am a vast admirer of  
18 Dr. Locklin.

19 MR. CUMMING: Q. Would this be a fair  
20 statement: to be precise, the management tool, perhaps  
21 the rate-maker's tool is elasticity of demand, not  
22 value of service or ability to pay, except to the  
23 extent "value of service" and "ability to pay" are  
24 substitutes for the term "elasticity of demand"?

25 A. No. Did you say value of service is a  
26 substitute for elasticity of demand?

27 Q. Yes, I did.

28 A. No, I didn't mean to say that. If I had --  
29 well, if I were the rate-maker and were making rates  
30 on this grain, we will say, and I assume that the





1 upper limit of what the traffic would bear or the  
2 amount that would continue to move would be comparably  
3 high, and at higher reaches of rates -- in other words,  
4 an inelasticity of demand -- and I mentioned it  
5 yesterday -- I might be tempted to climb up to 120  
6 or 130 per cent of fully distributed costs. In fact,  
7 I would be tempted to climb as high as necessary to  
8 bring my rate of return in harmony with the cost of  
9 capital to the end that I would have established a  
10 financial integrity of the railroad, and my securities,  
11 particularly the equity securities, would no longer  
12 be selling at 50 cents on the dollar but would come  
13 back to some parity -- the book investment has been  
14 made in good faith. But, as you rise up the scale  
15 you reach the problem of rate relationships. In a  
16 way the value of service concept, within it, has  
17 certain limitations. Mr. Roberts has dealt with rate  
18 relationships and historic rate relationships, and  
19 if you break through that ceiling you are going to  
20 really get a full return from this traffic. You have  
21 certain limitations under those general rate-making  
22 considerations. You can't tear your rate structure  
23 apart too badly on one commodity; the word "captive"  
24 has been used, where they are out of line with other  
25 relationships.

26 Q. Then, may I put it this way: that value of  
27 service -- what I am suggesting is that this may be  
28 a fair and short summary of your description of this  
29 problem -- that value of service is equal to the  
30 elasticity of demand plus the position in the rate







1 structure of any particular rate?

2 A. I think that is very well stated. I could  
3 have saved myself a great deal of effort if I had boiled  
4 it down into five words.

5 THE CHAIRMAN: Doctor, the making of rates --  
6 if the concept of "costs of service" were applied, how  
7 would the railways live?

8 THE WITNESS: If the concept of . . . ?

9 THE CHAIRMAN: Cost of service.

10 THE WITNESS: If that were applied, how would  
11 the railroads live?

12 THE CHAIRMAN: Yes.

13 THE WITNESS: Well, I think I testified that  
14 they probably would not live. It is like the pricing  
15 in any commercial enterprise. You don't get the same  
16 margin of profit in a department store down in the  
17 fertilizer department as you get in the jewelery de-  
18 partment. I am sure the same margins are not earned  
19 on all the gamut of goods.

20 THE CHAIRMAN: There is not the same mark-up?

21 THE WITNESS: There is not the same mark-up.

22 MR. CUMMING: Q. I would like you to look  
23 at the Canadian Pacific Railway's submission, Exhibit  
24 47, and I am drawing your attention particularly to  
25 paragraph 61 on page 19, where it says:

26 " The solution to the problem of fixed  
27 statutory rates for grain and grain products  
28 moving to export positions in western Canada  
29 would present no unusual difficulty if the  
30





1 " agricultural economy of western Canada were  
2 in a position to pay a just and reasonable rate  
3 for transporting such traffic."

4 I take it that the expression "if the  
5 agricultural economy of western Canada were in a  
6 position to pay" is a reference to the ability of the  
7 grain trade to pay, using the term "ability to pay"  
8 in the sense that you have been using it in our dis-  
9 cussion this morning?

10 A. I would say yes.

11 Q. Then, this exhibit goes on to recommend a  
12 solution, with which you are of course quite familiar.  
13 Would it be fair to say that the basis of that solution,  
14 or perhaps inherent in the recommendation of the  
15 railway that the solution take the form it does, is  
16 either a finding or an assumption that grain has not  
17 the ability to pay a higher rate?

18  
19  
20  
21  
22  
23  
24  
25 (Page 12917 follows)  
26  
27  
28  
29  
30







1  
2 A. Now, you are asking, if I understand it,  
3 if this proposal in its entirety, including the reliance  
4 on some payments from the Dominion government -- that  
5 is in your question?

6 Q. Yes, that is in my question. Just to be  
7 precise, what I have in mind particularly is that as a  
8 part of the railways' recommendation solution the  
9 rates charged to the shipping farmer remain unaltered?

10 A. Yes. Well, I would say that the ability  
11 -- the effect upon the shipping farmer has been appre-  
12 ciated, and it has been, I am sure -- the belief, I am  
13 sure, is held that the rate would be some hardship upon,  
14 you might say, marginal farmers, and the extent to  
15 which -- I am not in a position to say what that would  
16 be; I don't know whether the C.P.R. and C.N.R. have  
17 endeavoured to evaluate that.

18 Q. Dr. Edwards, when you say that the problem  
19 has been appreciated, can we take it, having regard to  
20 the solution that has been advanced, that the measure of  
21 that appreciation, as in the railways' view, is that the  
22 rate ought not to change as far as the farmer is con-  
23 cerned one iota? I suggest that follows from the  
24 solution that is recommended.

25 A. Yes, that is implicit in the proposal.

26 Q. And when I asked you earlier about this  
27 expression in paragraph 61 about the economy in western  
28 Canada being in a position to pay, as I understood your  
29 answer, that was used in the same sense as the term  
30 "ability to pay" has been used in this discussion, that





1 is as being interchangeable with elasticity of demand  
2 for transportation service?

3 A. Yes, I would say it would be. I would  
4 read that into that, those words at this time, yes.

5 Q. So then the measure of the railways'  
6 appreciation is one related to the transportation pro-  
7 blem rather than what might be generally described as  
8 considerations of welfare economics?

9 A. Well, I wouldn't say they were unrelated  
10 to the welfare economics. It may be that some others  
11 on the staff of the railways could better answer that  
12 question than myself.

13 MR. SINCLAIR: I think Dr. Edwards might be  
14 told that this was written by a lawyer. His name is  
15 on the last page of it.

16 THE CHAIRMAN: Which is?

17 MR. SINCLAIR: Mr. Wright and Mr. Sinclair.

18 MR. CUMMING: My friend sometimes complains  
19 in respect of his colleagues. I am not examining Mr.  
20 Sinclair. I am just trying to ask these questions of  
21 Dr. Edwards, if he is in a position to help us.

22 Q. What I am concerned about here, Dr.  
23 Edwards, is this, that when we were talking about para-  
24 graph 61 and this business about ability to pay, as I  
25 understood what you were saying, that consideration is  
26 addressed to the transportation aspect of a grain  
27 problem, that it is addressed to the elasticity of  
28 demand for transportation service, and it was because  
29 the railways had come to the conclusion that the grain  
30







1 farmer couldn't pay any more that the solution took this  
2 other form?

3  
4 A. Well, the technical man who would con-  
5 struct the rate would probably use it in a narrow sense,  
6 but you can't evaluate elasticity of demand for  
7 transportation in a vacuum, you have to consider what  
8 enters into that, and behind that elasticity demand  
9 for transportation is the consideration of the economic  
10 factors that support that demand and of productive  
11 power and the continuation of the markets. So that  
12 the economic conditions of the grain grower must be in  
13 mind to some degree, must have been in mind to some  
14 degree in the making of this proposal. Of course, at  
15 the back of this proposal was, I suppose, the fact that  
16 the grain now enjoys a rate of about half a cent a ton-  
17 mile, and that rate permits western Canadian grain to  
18 move into the markets necessary to it, which means  
19 world markets. So you have a sort of, I suppose, if  
20 you are going to move the amount you are now moving, a  
21 pretty tight market mechanism for the half a cent a  
22 ton mile freight rate, when taken with other transpor-  
23 tation costs involving delivery of wheat to other  
24 countries where it meets competition from other grain-  
25 producing nations. Having that in mind, then the  
26 present half a cent a ton mile rate does have the im-  
27 portant consideration that it moves this volume of  
28 traffic. It works, yousee.

29 Now, in the United States you have a wholly  
30 different set of conditions whereby the grain can move





1 at the commercial rates, so if the rate was changed from  
2 one-half cent to one cent, there is a problem of the  
3 effect of that rate on the price of wheat that the  
4 farmer would receive. Wheat prices are not made on  
5 the farms of Canada, they are made in the foreign mar-  
6 kets, and those prices back up to the farmer who is the  
7 residual receiver of the revenues received in Europe  
8 after you have met all the intermediate costs of  
9 delivery to Eruope.  
10

11 Q. So I take it it must follow from that  
12 that when in paragraph 61 they are talking about the  
13 position of the economy to pay, that goes beyond the  
14 rather narrower use of the term "ability to pay" as a  
15 mere matter of elasticity of demand, but it has some  
16 of these considerations of what I describe as welfare  
17 economics in it as well, these matters that you have  
18 been discussing?

19 A. Yes, I would think it would have. When  
20 you make broad rate structures you have to look to the  
21 effect of those rate structures to some degree, the  
22 effect of those rates on the economics of the area and  
23 their ability to generate the traffic; they can't be  
24 out of mind.

25 THE CHAIRMAN: And world competition, Dr.  
26 Edwards?

27 THE WITNESS: Oh, yes.

28 THE CHAIRMAN: Give-away programmes of your  
29 own government and of the United States?

30 THE WITNESS: That is right. The United







1 States, I am sure, has entered into very heavy sociolo-  
2 gical considerations in arriving at parity prices and  
3 the tremendous grain supports by the federal government.  
4 The Canadian farmer is up against that in world markets.  
5

6 MR. CUMMING: Q. It goes beyond the sociolo-  
7 gical stage; it may be political there.

8 MR. SINCLAIR: Well, I don't know if he  
9 should answer that. He has to return to the United  
10 States.

11 MR. CUMMING: Q. I take it that what you  
12 have been saying is that a reflection of these larger  
13 considerations must be so, because if this solution  
14 were based solely on the elasticity of demand for  
15 transportation services in a rather narrower sense, then  
16 would it not follow that the solution proposed assumes  
17 a totally inelastic demand for transportation by the  
18 grain trade?

19 A. The substance of your question assumes ---

20 Q. It is a long one.

21 A. Yes, it is a long one, just like some of  
22 my answers.

23 Q. If what you have been telling us in answer  
24 to my questions and in answer to questions by the  
25 Chairman, that this consideration or this proposal set  
26 out in paragraph 61 was not the result of all these  
27 additional considerations, if it were confined to a  
28 demand for transportation service alone, if that was  
29 the narrow basis of the statement in paragraph 61, would  
30 it not follow that the solution suggested assumes a





1 totally inelastic demand for transportation service in  
2 the grain trade?

3 A. No.

4 Q. I don't know whether I have done any  
5 better that time or not.

6 A. Well, you are talking about the perfectly  
7 inelastic -- you are asking here -- is this right? --  
8 that this proposal contemplates the perfectly inelastic  
9 demand ---

10 Q. I am putting that suggestion for this  
11 reason, that as it appears there is a statement in effect  
12 that the agricultural economy in western Canada is not in  
13 a position to pay any more. Now, if that meant that  
14 it had no ability to pay any higher freight rate than  
15 it is presently paying, doesn't that mean that the  
16 demand is inelastic -- oh, I am sorry, elastic. I  
17 have the curve going the wrong way -- totally elastic,  
18 the curve would be flat and the traffic would dry up?

19 A. No, I don't think it assumes that the  
20 demand is elastic, perfectly elastic, and would dry up.  
21 I think there would be -- you see, now you are asking me  
22 the question: does it not assume that no traffic at all  
23 would move if the rate proposal were to the effect that  
24 the rates paid by the farmer were, in effect, absorbed  
25 by -- were one cent a ton mile, then no grain would move.  
26 Now, that is your question?







1 Q. That is in effect the position, yes, based  
2 on the statement.

3 A. Perfectly elastic. That no grain would move,  
4 put it that way. No, I am sure the grain would con-  
5 tinue to move. To me it might mean the grower would  
6 receive less.

7 THE CHAIRMAN: Or quit raising wheat.

8 THE WITNESS: Or quit raising wheat or turn  
9 to livestock or change his economy. If he did not  
10 raise wheat he would have to do something, it is  
11 obvious, and that is what I said, to the extent that  
12 he stopped raising wheat.

13 MR. CUMMING: Q. I am sorry, I don't actually  
14 know who is interrupting who. Did I interrupt you,  
15 sir? I did not mean to.

16 A. Well, I raised the question to our people  
17 that if the farmer pays one cent a ton-mile what does  
18 it amount to in terms of the price of a bushel of wheat;  
19 or, better yet, if he absorbed it, what would be  
20 the percentage reduction in his "take home" pay at the  
21 end of the year. The statistics are not clear to me  
22 now, but it may have been the measure of 10 to 15 per  
23 cent, but I stand to be corrected.

24 But for the purposes of your illustration,  
25 if he absorbed that entire increase, then the question  
26 would be: what would the grower of wheat do if  
27 threatened with some proportionate loss in his annual  
28 income? Well, I think here it would be as high as  
29 8 per cent per bushel of wheat.  
30





1 MR. SINCLAIR: Twelve cents on \$1.50 at  
2 Regina, that is where they would come.

3 THE CHAIRMAN: Why take Regina?

4 MR. SINCLAIR: Just seemed a good place to  
5 take, mid-point, where the rate is 20 cents on a  
6 hundred, 12 cents a bushel.

7 MR. CUMMING: Q. I was wondering, Dr. Edwards,  
8 if you could tell us what tests or studies the railways  
9 made to reach the conclusion set out in paragraph 61  
10 that the economy in western Canada is not in a  
11 position to pay a just and reasonable rate. I raised  
12 my voice, Dr. Edwards, That was a question.

13 A. I thought you were about to carry on.

14 Q. No, I will leave it at that for the  
15 moment.

16 A. Well, I don't really know if I can  
17 give the full answer to that. I suppose one would have  
18 to be a Canadian and live with the facts of life in  
19 Canada for a period of time as a transportation  
20 economist, to fully appreciate all the facts they might  
21 have considered and their considerations behind this;  
22 but it would certainly create the least shock, if we  
23 might call it that, this 8 per cent factor, to the  
24 grain growers if the program pursued were followed.  
25 It would be the least unsettling thing to do.

26 Q. Is your conclusion arrived at, Dr.  
27 Edwards, on a basis of broad judgment, or do you know of  
28 any economic tests, market surveys or anything that  
29 the railways may have done --?

30 A. No sir.







1 Q. To base this conclusion upon?

2 A. No, sir. I should have answered that  
3 way in the first place, that is right.

4 Q. And similarly --

5 A. I might say -- might I carry on? --  
6 that this determination of the rate considering value  
7 of service considerations, as they came out of the  
8 traffic department's office, and the question of what  
9 considerations had been made, would be most properly  
10 addressed to Mr. Roberts on that score or possibly  
11 Mr. Crump.

12 Q. Just as a companion to that I was  
13 wondering -- and I suppose the answer would be the  
14 same but perhaps we might have it on the record -- were  
15 there any tests made to demonstrate that the  
16 demand is elastic or is inelastic, or to measure the  
17 elasticity of demand in any way for transportation  
18 service by the grain trade.

19 A. To my knowledge not. You are thinking  
20 of the setting up of a demand schedule?

21 Q. Yes.

22 A. Except the consideration that -- I am  
23 sure there was a belief that substantial volumes  
24 of grain would continue to move and if there were no  
25 relief and the carriers simply sought to make the  
26 rates on a laissez faire application or free  
27 market conditions.

28 Q. If the elasticity of demand and the  
29 position in the rate structure were the sole con-  
30 siderations -- that is, forgetting about the social





1 or economic problems of the prairie farmer -- would  
2 the rate be increased?

3 A. He has not raised his voice yet.

4 Q. That happens to be a question mark.

5 A. All right, yes, pardon me. I thought  
6 you were getting consultation to carry on. I suppose  
7 it would. The possibilities are there. Of course you  
8 have an Act of Parliament against you.

9 Q. Perhaps I should have included the  
10 suggestion that you forget about the Act of Parliament  
11 as well.

12 A. And you are asking me to give my  
13 interpretation of what would be done?

14 Q. Yes.

15 A. I am not speaking out of the mouth of  
16 Mr. Roberts.

17 Q. No.

18 A. Why, yes, indeed. I would certainly go  
19 immediately to out-of-pocket costs, and then I would  
20 add some increments above that which, considering the  
21 volume of this traffic and the carrier's need for the  
22 funds, the low rate of income, I would want  $7\frac{1}{2}$  cents,  
23 and then I would certainly seek --

24 Q.  $7\frac{1}{2}$  mills.?

25 A.  $7\frac{1}{2}$  mills., and I would certainly seek  
26 something close to what is being proposed here.

27 Q. As I gather from what you were saying  
28 yesterday, Dr. Edwards, volume 72, page 12804.

29 MR. SINCLAIR: That question that is referred  
30







1 to there, that is the answer to the question but the  
2 question is some pages before, they tell me, page  
3 12800. The reporter starts: "Reporter reads" and  
4 he read it, I think. Maybe it would be better to  
5 read the question and the answer together.

6 MR. CUMMING: Q. Yes, I think perhaps in  
7 the middle of the page, what was being discussed there  
8 was this. Mr. Frawley put this to you.

9 " Q. Why don't you assume the opposite,  
10 Dr. Edwards? Just leave it to the farmer out  
11 there to pay the rate. Make the proper rate  
12 that the farmer is willing to pay."

13 I think I can skip out what is in between.

14 COMMISSIONER ANSCOMB: Did he use the  
15 words "willing to pay"?

16 MR. CUMMING: The word is "willing" to pay,  
17 in the transcript, Mr. Commissioner Anscomb.

18 MR. SINCLAIR: I think he clarified that.

19 MR. CUMMING: Q. I was not putting any  
20 particular stress on willingness or unwillingness.  
21 I do not think it is the real consideration. What  
22 I had in mind here, Dr. Edwards, was really only the  
23 part of your answer in which you said at page 12804:

24 " I would contemplate that there would be  
25 possibly some loss in traffic; there would be,  
26 no doubt, some hardship on the shippers that  
27 does not now exist in bearing that rate.  
28 There must be some play around that present level".  
29 And so on. I take it from the tenor of your answer,  
30





1 Dr. Edwards, that you would not contemplate a very  
2 substantial falling off in the grain traffic if the  
3 rates were to rise to the level which you say it  
4 should be normally be set at on the basis of con-  
5 ventional principles?

6 A. In making this answer I did not give  
7 contemplation to the specific amount that would be  
8 moving, but if the total effect of this is an 8 per  
9 cent decrease in the take-home earnings of the farmer,  
10 I would not contemplate that there would be a great  
11 increase.

12 I know agricultural prices in the United  
13 States fluctuate more substantially than that from  
14 period to period, and some of the fluctuations have  
15 promise of being long continued, but I have not been  
16 aware of any heavy exodus from the farms or diminution  
17 in the utilization of the farms for the crops presently  
18 being raised.

19 Q. Then does it follow from that that it  
20 is assumed that the demand for transportation service  
21 in the grain trade is relatively inelastic? Just to  
22 finish it, when you say that a rise of the order that  
23 is involved would not lead you to expect any serious  
24 decline in the traffic offering, I take it from that  
25 (I want to know whether I am being fair in this) that  
26 you are assuming that the demand for transportation  
27 services is relatively inelastic.

28 A. I would be inclined to believe so. You  
29 might find the point you could go to maximize your  
30







1 contribution, I suspect well above one cent  
2 potentially.

3 At the present time, of course, you are  
4 hauling it at an out-of-pocket loss. By all the  
5 principles you would be better off if you did not  
6 haul any of it.

7 Now let us move up to the out-of-pocket  
8 level of  $7\frac{1}{2}$  mills. Now, as between the volume  
9 moving at a break-even point, which contributes  
10 nothing to your burden, and a factor of 10 mills.,  
11 even though you lost half the grain, it is just a  
12 matter of arithmetic: you would be better off at 10  
13 mills. than you would be at  $7\frac{1}{2}$ .

14 In that shifting between  $7\frac{1}{2}$  mills. and 10  
15 mills. we are working in an area that has closed  
16 half the gap between 5 mills. and 10 mills.

17 I think the results would support something  
18 at least up to 9, 10, 11 or some mills. In other  
19 words that is a relatively narrow margin to cause  
20 sharp changes in the economy of an area.  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30





1 Q. Having in mind the relative inelasticity  
2 of the demand the rate that the rate maker might fix  
3 on the application of these conventional principles that  
4 you have outlined to us, and particularly having regard  
5 to the inelasticity of the demand, might conceivably go  
6 well above the cent per ton mile?

7 A. I can conceive that it would; yes, I can  
8 conceive that it would. The movement might do that,  
9 yes.

10 Q. Without having a significant impact on  
11 the traffic?

12 A. Yes; you have that situation on domestic  
13 grain that moves at rates of 20 mills. per ton miles;  
14 it appears to move freely.

15 Q. And that might be the level at which the  
16 export grain, apart from other considerations, could be  
17 set?

18 A. I find it difficult to answer that ques-  
19 tion. You say "apart from other considerations."  
20 There are a tremendous number of "other considerations."

21 Q. I appreciate that.

22 A. Yes.

23 Q. Well, does it follow from what you say  
24 that the proposal of the railways really arises from  
25 social-economic considerations -- that is, consideration  
26 of the economic situation of the western farm economy --  
27 rather than rate making consideration? I am saying  
28 "the proposal," Dr. Edwards, so that there will be no  
29 confusion. I mean, inherent in that, the subsidy  
30







1 recommendation?

2 A. I suppose there are economic sociological  
3 considerations in that proposal.  
4

5 Q. Now, I am nearly through with this point,  
6 but there are just a couple of further questions on  
7 this general matter.

8 Dr. Edwards, I want to put to you a hypothetical  
9 case. Suppose that, as a matter of rate making judgment,  
10 having regard to all these considerations like place in  
11 the rate structure, and all those factors, a rate  
12 maker were to conclude that the rate for grain moving  
13 to export positions should be, say, .8 cents per ton  
14 mile rather than the one cent level that is suggested --  
15 or rather than the level which would rate full distributed  
16 cost-- and that the rate maker, in coming to that con-  
17 clusion, also considered that there would be no sig-  
18 nificant decline in the traffic; and then let us  
19 suppose, as well, that the railways' suggestion is  
20 that the rates actually charged to the farmer should  
21 not be raised, then would the basis of the subsidy which  
22 the railways seek be the difference between the  
23 statutory rate and the rate level which, on conventional  
24 rate-making principles, is a just and reasonable level,  
25 or should it still be the difference between the  
26 statutory rate and full cost?

27 A. Well, of course, I would say . . .

28 Q. I am not trying to interrupt you, but in  
29 fairness I might tell you that my next question is  
30 going to be the same question but instead of having





1 .8 cents revenue per ton mile I am going to substitute  
2 2½ cents -- so that you can see what is coming.

3 A. Yes; you are testing out whether I believe  
4 in the application and consideration of the value of  
5 service factor.

6 Q. Maybe you would like to have some time  
7 to think about this?

8 THE CHAIRMAN: We might leave this until the  
9 afternoon for the answer.

10 MR. CUMMING: Very well, Mr. Chairman.

11 THE CHAIRMAN: Dr. Edwards, yesterday in  
12 your examination by Mr. Frawley there were a number  
13 of references to burden studies. Now, you would be  
14 familiar with the institution of the burden study in  
15 the ICC. Can you tell us how long it took to prepare  
16 the original burden study?

17 A. To get it rolling it took, I guess, a  
18 good two to three years -- between its inception and  
19 the time it first came out.

20 Q. And others have been prepared since?

21 A. Yes, they are now prepared every year;  
22 and the study, we will say, for the year 1959 will  
23 probably be off the press in the fall of 1961. There  
24 is about one and a half years to operate in and to  
25 assemble the statistics and process them, and so on.

26 Q. Now, do you know, or do you not know,  
27 whether it is the fact that with the C.N.R. in Canada  
28 they could not have the facts to prepare a burden study?

29 A. No; it takes a great deal of work to  
30







1 assemble the data and the movement of the traffic and  
2 so on for all commodities.

3 Q. Well, do you know whether all the data  
4 is available -- the original data -- to the Canadian  
5 National?

6 A. I am informed by Canadian National that  
7 they do not have the currently maintained data to fill  
8 out the Rail Form A application; and you would have to  
9 apply the Rail Form A type of costing, using regional  
10 and territorial costs; you could never run a traced  
11 study as was done here.

12 THE CHAIRMAN: Thank you, doctor. We will  
13 adjourn until two o'clock.

14  
15  
16  
17 ---Luncheon adjournment.





----- On resuming at 2.00 p.m.

THE CHAIRMAN: Now, Mr. Cumming, you want those questions?

MR. CUMMING: Yes, Mr. Chairman. My friend Mr. Sinclair was good enough to get one taken off by the reporter and it has just been handed to me. I thought I would just check it and then I could hand it to Dr. Edwards, because I think that would be easier than trying to repeat what I said before.

Q. Yes, Dr. Edwards, that seems to ring a bell in any event. Then you can have my last question to you before you. Perhaps, Dr. Edwards, you would be good enough to read it from the note that is there and then I won't endeavour to repeat it. Then we can have your answer.

A. Shall I read it aloud?

Q. I will read it to you and then we can have it again. My question was this, Dr. Edwards. I want to put to you a hypothetical case. Suppose that as a matter of rate-making judgment, having regard to all these considerations like place in the rate structure and all those factors, a rate-maker were to conclude that the rate for grain moving to export positions should be, say, .8 cents per ton rather than the one cent level that is suggested -- rather than at the level which would be fully distributed cost -- and that the rate-maker in coming to this conclusion also considered that there would be no decline in the traffic. Then let us suppose as well that the railways' suggestion is that the rates actually charged to the farmer should not be raised. Then







1 would the basis of the subsidy which the railways seek  
2 be the difference between the statutory rate and the rate  
3 level which, on conventional rate making principles,  
4 is a just and reasonable level, or should it still be  
5 the difference between the statutory and the full cost?

6 A. The subsidy would be the difference  
7 between the statutory rate and the determined just and  
8 reasonable level.

9 Q. Then I indicated to you that my next  
10 question would be the same question, save that as a  
11 matter of rate making judgment, the rate-maker concluded  
12 that the proper rate should be, let us go as high as,  
13 2½ cents per ton mile, and all the other factors are  
14 the same. Then what would be the basis of the subsidy?

15 A. The answer would be the same.

16 Q. That is to say, that consistent with  
17 that proposition and even if the just and reasonable  
18 rate on that basis were substantially in excess of  
19 fully distributed costs, that the subsidy which, on  
20 this basis, is sought, would be the full amount of the  
21 difference between the statutory rate and that just  
22 and reasonable level above full cost?

23 A. Yes.

24 Q. I see. Now, Dr. Edwards, I go on  
25 to something else, and I refer you to some portions  
26 of your memorandum of evidence, the precis, which was  
27 put in by you before Christmas. I refer you  
28 particularly to page 2 in your second paragraph where  
29 you say:

30 "The basic consideration from an economic  
standpoint is that a large segment of  
traffic, such as western grain moving





1 to export positions, should not be  
2 a burden on other traffic. To  
3 avoid being a burden on other traffic  
4 or on the railways, the revenues  
5 received from this large segment of  
6 traffic cannot be appreciably lower  
7 than the total cost."

8 I am wondering, sir, if you can  
9 give us some idea as to what a breaking point is at  
10 which a segment of traffic is small enough to permit  
11 rates to be charged which do not include a fair proportion  
12 of constant costs, that is to say, on this reading,  
13 means, I suppose, what constitutes basic traffic?

14 A. Have I used the term "basic traffic"  
15 or the "basic consideration"?

16 Q. You said "basic consideration" but here  
17 you are talking about a large segment of traffic, and  
18 we have heard other witnesses for the Railway say that  
19 one of the reasons why the level should be as high as  
20 is proposed is that the grain trade is basic to the  
21 plant.

22 MR. SINCLAIR: Grain traffic.

23 MR. CUMMING: Q. Or the grain traffic?

24 A. I would say that no traffic should  
25 burden any other traffic in the sense that the rate  
26 should be just and reasonable in that they cover the  
27 out-of-pocket costs, and that the margin above out-  
28 of-pocket costs be based upon these factors we have  
29 been discussing this morning; and the greater the  
30 volume of traffic constituted by the commodity we are  
discussing, the more important it is that its rate be  
properly adjusted, considering all pertinent economic







1 considerations such as we discussed earlier.

2 Q. Now, Dr. Edwards, let me ask you this.  
3 Is this principle which you enunciate in the paragraph  
4 that I read to you, really confined to large segments  
5 of traffic, or would it apply to what might be  
6 described as small segments of traffic?

7 A. It would apply to small and large segments  
8 of traffic.

9 Q. Is there any flexibility?

10 A. Economically there is no flexibility  
11 in the sense that the rate should be properly adjusted  
12 to rate-making factors, that is the substance of what  
13 I am saying, whether the movement be big or large.

14 Q. Then whether the movement be big or  
15 large, would it be fair to say that any segment of  
16 traffic, whatever its size, which returns no more than  
17 out-of-pocket expenses or perhaps just a very little  
18 bit more, or in any event falls short of full cost,  
19 whatever that may be, would it be fair to say that any  
20 such traffic is a burden on other traffic?

21 A. If it is below the level of the rates  
22 determined by proper rate-making considerations. Did  
23 you imply that any rate below fully distributed costs  
24 was burdening other traffic, was that your question?

25 Q. That was not my implication, that was  
26 my question, Dr. Edwards?

27 A. No, a rate below fully distributed  
28 costs, if that rate properly reflects the cost and  
29 value of service considerations, is not burdening other  
30 traffic.

31 Q. But if it is a very large segment  
32 of traffic, then in order to avoid being a burden on





1 other traffic the revenue, as you say, cannot be  
2 appreciably lower than the total cost?

3 A. No, and in using the term here "cannot  
4 be appreciably lower than the total cost" that was a  
5 statement that is predicated on the facts that in  
6 this grain case the just and reasonable rate as found  
7 by Mr. Roberts was one cent a ton mile, and the costs  
8 we found were slightly above that level. Then my  
9 conclusion would be that the rate in this case cannot  
10 be much below, appreciably lower than costs we found  
11 in the study, but that that conclusion is predicated  
12 upon the finding of the level of the just and reasonable  
rate which coincided closely with the full cost.

13 THE CHAIRMAN: Mr. Mann.

14 COMMISSIONER MANN: Mr. Edwards, can you  
15 then say generally that the larger the traffic, the  
16 larger the portion of the traffic is to the whole, the  
17 more closely it must approach total cost? Would  
18 that be a fair way of saying it? Is there a direct  
19 relationship when you reach total cost of the size of  
the traffic in relationship to the whole?

20 A. Well, the carrier's reliance upon that  
21 traffic is very very great, if it is a very large part  
22 of the whole; but if it could be demonstrated that that  
23 traffic would make an even greater contribution to the  
24 carrier's burden at 10 per cent below the fully  
25 distributed costs then at the old earnings,  
26 then that rate should be 10 per cent below the fully  
27 distributed cost for that tied in to all the proper  
rate-making considerations.

28 COMMISSIONER MANN: I understand that, but  
29 you see, you say here on page 2 of your precis:







1 "To avoid being a burden on other  
2 traffic or on the railways, the  
3 revenues received from this large  
4 segment of traffic cannot be apprec-  
5 iably lower than total cost."

6 So you are tying the size of volume of this traffic  
7 to the concept of total cost. Now, my question is  
8 simply this, Dr. Edwards. Does not that depend on  
9 the size of the universe you use? This is what Mr.  
10 Cumming, I think, was asking as well. How far down  
11 can I scale this? Supposing a segment of traffic  
12 is large in relation to a similar universe. Do  
13 you then come to the same conclusion that that large  
14 segment should return not less than close to total  
15 cost, would you go that far? Where do you cut  
16 off your size, where do you stop?

17 A. I do not draw a line anywhere in the  
18 terms of size.

19 COMMISSIONER MANN: Let us take it down to branch lines.

20 A. The point is, if the traffic was a  
21 very large part of the traffic of an area as a whole,  
22 indeed, if it were 100 per cent of this traffic, then  
23 when you constructed the full costs and found that  
24 the full costs discouraged traffic severely, then you  
25 would have to drop back. You would be better off  
26 dropping back to the level that would maximise the  
27 contribution.

28 COMMISSIONER MANN: Would it be less  
29 than total costs?

30 A. It would be less than total costs.

COMMISSIONER MANN: Might it be considerably less than





1 total cost?

2 A. Yes, indeed.

3 COMMISSIONER MANN: Might it be just slightly  
4 above out-of-pocket?

5 A. Well, in principle it might be above  
6 out-of-pocket. Of course, if it is above out-of  
7 pocket the carrier would be quickly in bankruptcy  
8 and would be unable to meet all its fixed costs and  
9 that portion of its payrolls that were in the constant  
10 cost category. It would pass out of existence.

11 COMMISSIONER MANN: Thanks very much.

12 COMMISSIONER ANSCOMB: Just go broke?

13 THE WITNESS: Yes, just go broke.

14 MR. CUMMING: I think Commissioner Mann  
15 has covered the remainder of the points I have on  
16 that.

17 COMMISSIONER MANN: I am sorry.

18 MR. CUMMING: So I will go on to something  
19 else. Further down this page you refer to the  
20 selection of the year 1958, and you say that the year  
21 1958 is a representative year. I was wondering if  
22 there are any factors about 1958 which might reduce its  
23 value as a representative year for this study?

24  
25  
26  
27  
28 Page 12944 follows  
29  
30







1  
2 A. Well, the railroads people thought not.

3 Q. You see, what I was concerned with, Dr.  
4 Edwards, is this: in the year 1958, the volume was  
5 13.6 billion ton-miles, as compared to a 10-year average of 12.  
6 billion ton-miles, apparently a billion ton-miles over  
7 the 10-year period average, and I wanted to put this  
8 to you in the light of that consideration. This cost  
9 study shows a deficit to the railways from the move-  
10 ment of grain of the order of half a cent ton-mile.

11 A. Yes, sir.

12 Q. That is generally the result of the study.  
13 Now, could it be said that by taking a year with a  
14 billion ton-miles more than the average grain movement  
15 there is an overstatement of what could be expected  
16 to be the ordinary costs of the grain traffic.

17 A. No, I don't see that. If you have more  
18 traffic, you have more cost and you have more revenues.  
19 I don't follow the overstatement. In fact, if you  
20 had a billion more ton-miles of grain and that carried  
21 through into the total system-wide traffic, a billion  
22 more ton-miles because of that, you would be taking  
23 your constant costs and splitting them a little finer  
24 because you had a greater volume to spread the constant  
25 costs over that particular year.

26 Q. I was working backwards from the result of  
27 the study in this way, Dr. Edwards, and it may be a  
28 complete misapplication, and if it is you can tell me  
29 and we will pass on. If there is a loss to the rail-  
30 ways of half a cent a ton-mile, and you have carried





1  
2 an extra billion ton-miles of grain traffic, there is  
3 \$5 million of loss.

4 A. You mean the total dollar loss?

5 Q. Yes, the total dollar loss.

6 A. Yes, the total dollar loss would be greater.

7 Q. So with that in mind, I am just wondering  
8 whether, having taken a year which is apparently  
9 substantially above the average year so far as volume  
10 of grain traffic is concerned, we see a picture of a  
11 larger loss than the railways are normally faced with  
12 in handling this traffic. Do you see the point I am  
13 getting at?

14 A. I see your point, but to me it is a mis-  
15 application. The critical thing here was if the  
16 loss was 5 mills, say, per ton-mile and you say, well,  
17 the more traffic you handle the greater the dollar loss--  
18 but the rate relationships here are geared in the study  
19 to the relationship between half a cent and one cent,  
20 and if you had a billion more ton-miles to distribute  
21 the constant costs over, the unit cost would tend to  
22 shrink because of that, slightly less than you would  
23 otherwise find, because you are distributing fixed  
24 costs over ton-miles of traffic.

25 Q. Of course, you get the complete reduction  
26 on the variable costs, but, as you point out, the  
27 fixed cost is spread a little thinner.

28 A. Instead of it being 5 mills loss, if you had  
29 a billion ton-miles less of traffic, that out-of-  
30 pocket loss might not have been 5 mills, it might have







1  
2 been 5.1 mills -- I mean the loss in reference to the  
3 total cost, the 5 mills overall loss.

4 Q. The costs that were used in the study  
5 average over a 3-year period adjusted, as Mr. Stenason  
6 has told us, to the 31st of December, 1958.

7 A. Yes, sir.

8 Q. Are you satisfied that the years 1957 and  
9 1958, taken together as group years, are representative  
10 from a cost point of view?

11 A. I would believe them to be so, yes.

12 Q. Were any tests made to establish their  
13 representativeness, if I may use that term?

14 A. The carriers gave consideration to that, there  
15 was discussion on that well over a year ago, and there  
16 was a feeling that those were representative for the  
17 expenses used.

18 Q. I take it in your capacity as a consultant --

19 A. I was satisfied.

20 Q. You were satisfied?

21 A. Yes, indeed.

22 Q. Did the railways, in checking out their  
23 cost study that they conducted, do analysis for the  
24 individual years in that period to compare the results?

25 A. The carriers used the three years, they did  
26 test the individual years. The three-year period was  
27 taken into the regression analysis in its totality.  
28 They could not have gone back, I am informed, earlier  
29 if they desired because of the changed system of  
30 accounts. The three-year period was utilized for the





1  
2 maintenance of way expenditures.

3 Q. Would testing individual years entail re-  
4 running of the basic data -- at least reassembling it?

5 A. Yes.

6 Q. Then we can perhaps understand why it is  
7 not done that way.

8 I want to turn to the question of empty car  
9 movement, Dr. Edwards. You speak of it on page 4 of  
10 your brief, and you say in the third paragraph there  
11 that empty car movement east of the Lakehead and  
12 Armstrong, Ontario, was excluded in calculating the  
13 cost of the grain movement. Was that what you  
14 would describe as an element of conservatism in this  
15 cost study?

16 A. No, I wouldn't say it was necessarily con-  
17 servatism. It was an endeavour to localize the  
18 car movements applicable to the grain movements. If  
19 you take the movement east of Armstrong, you run into  
20 certain problems that both railroads have movements  
21 from Western Canada, car load movements, that swing down  
22 into the United States west of the head of the lakes,  
23 travel south of the border, come back into Eastern  
24 Canada at transfer points, of course, to near Toronto  
25 or Montreal, and to run that cycle involves the tracing  
26 of the cars in the United States. You would have to  
27 pick up the loaded movement, too.

28 Q. On page 5 you say:

29 "As stated earlier, the development of empty car-  
30 miles charged to the study traffic excluded empty







1  
2 car mileage on cars used in moving the Western  
3 grain crops to export position where this mileage  
4 occurred east of the Lakehead. In this there  
5 has been an understatement of the empty car-miles  
6 that could have been charged to the study traffic.  
7 In my opinion the method used to develop empty  
8 car-miles and gross ton-miles -- empty for the  
9 study traffic is conservative."

10 I take it from the statement there that the con-  
11 servatism in the method of developing empty car-miles  
12 for this study was excluding empty car-miles east of  
13 the Lakehead, and I gather you don't really consider  
14 that to be an element of conservatism.

15 A. At the time that was written it was the  
16 feeling that it probably was an element of con-  
17 servatism, because you would have a loaded movement  
18 coming down to United States connections west of the  
19 head of the lakes. That loaded movement terminates  
20 somewhere in the Eastern States. How far the load  
21 was carried without checking, we don't know. The  
22 car then cycles back into Canada, because there is  
23 a heavy out-flow out of the lakes and a heavy inflow  
24 of empties into Eastern Canada, and from Toronto and  
25 Montreal West you have a very sizable empty movement  
26 of cars tracing back into Western Canada. Now, it  
27 was based on that general flow of traffic and knowledge  
28 of that loaded and empty flow that the belief was held  
29 at the time this was written that if we carried through  
30 these cycles we would find an increased empty return





1  
2 ratio. But until it was tested to determine it --  
3 I can't be sure; I can't say without qualification  
4 that there was a statistical test of those cars traced.  
5 So I felt on looking this over that where I had used  
6 the judgment before and the judgment expressed to me,  
7 I felt I should qualify my statement. I might say  
8 in that connection that prior movement of empties was  
9 the test -- the Canadian National Railway ran a test  
10 of subsequent empty movements and found that the empty  
11 ratio, the ratio of empty miles to loaded miles was  
12 quite substantially increased if you traced sub-  
13 sequent to the unloading of the grain rather than  
14 prior to the loading of grain. I am not certain at  
15 the moment whether they traced those cars down through  
16 the United States on that cycle. No, I am informed  
17 they did not.

18 MR. SINCLAIR: I think this question was raised  
19 once before, and maybe you would like to clear that  
20 up and put a figure on the record and it would save  
21 me re-examining on it. This was raised by some other  
22 counsel with some other witness.

23 MR. CUMMING: Q. I had some discussion with  
24 Mr. Stenason about it on May 13 in Volume 69 at  
25 pages 12295 and 12296. I am not just sure whether  
26 the test that he is referring to there is the same that  
27 you have just described. Perhaps I might read Mr.  
28 Stenason's answer and the question at page 12295,  
29 Volume 69.

30 A. Mr. Stenason informs me that he has used a







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2 pro-rate of the empty miles against the loaded miles  
3 in the reverse direction.  
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1  
2 Q. Yes; that is fine; then, I won't bother  
3 reading it to you, because that is what this answer  
4 says, and it makes it different, had they used that  
5 test of 64 per cent empty movement as against 57 per  
6 cent empty movement?

7 A. Yes, that is right.

8 Q. But that test that Mr. Stenason referred  
9 to is not, I take it, the same as the tracing of sub-  
10 sequent empty movement?

11 A. No, it is not.

12 Q. By which railway -- or was it done by  
13 both -- was it . . .

14 A. It was done by the Canadian National.

15 Q. Can you tell us why the tracing of post  
16 empty movements results in a finding of more empty  
17 movement attributable to the traffic than the tracing of  
18 prior empty movements?

19 A. The Canadian National's explanation of  
20 that is that the points at which the major volume of the  
21 grain is unloaded leaves the boxcar at relatively a  
22 more distant point from its next potential loading point  
23 where it can find a load; it has to travel further.  
24 That was the general explanation.

25 Q. Would you expect that to be a condition  
26 peculiar to the Canadian National as compared to  
27 Canadian Pacific because of its somewhat rather more  
28 far-flung export points?

29 A. I don't think it would be peculiar to  
30 Canadian National, because I believe the situation would







1 arise primarily at the head of the lakes.

2           You have, of course, the export position at  
3 Fort Churchill which has some reloading -- vessels that  
4 take out the grain and bring in traffic -- but that is  
5 a small part of the whole; and you have Prince Rupert  
6 which has quite a high order of reloading, I under-  
7 stand, but that, again, I think, accounts for less than  
8 two per cent of Canadian National grain moving to  
9 export positions.

10           So that substantially leaves you with the  
11 head of the lakes and Vancouver, and I believe that  
12 the Vancouver rate of reloading is fairly comparable  
13 for both railroads.

14           Q. Well, may I just ask you this: In your  
15 opinion is there a case to be made for the charging of  
16 any particular movement of post empty movement as  
17 against prior? Which is the more logical, or would  
18 you choose between the two?

19           A. Well, I have generally felt that the  
20 prior empty movement was the more logical in the  
21 sense that a car, when made empty, is assigned some  
22 place by the car dispatcher with good purpose, and when  
23 it heads east, west, north or south, from a given point  
24 it is sent with a definite purpose in mind -- that is,  
25 going to satisfy a demand for empty cars at its point  
26 of destination; so, in a way, it is sort of dedicated  
27 empty movement for the loaded movement. It is a little  
28 more in line with the pattern, I think, of the outbound  
29 loads.  
30





1 Q. Then, it being the logical choice, would  
2 it be fair to say that the adoption of it has not  
3 introduced an element of conservatism into the cost  
4 study?

5 A. I would think not. Maybe the Canadian  
6 National have a different view; but they had both  
7 studies and used the one with prior movement.

8 Q. Dealing just generally with this  
9 principle of charging prior empty movement for a  
10 moment -- this, perhaps, is apart from the grain traffic  
11 -- if you have a movement which is triangular from  
12 point A to B to C -- in a triangular direction or shape  
13 -- full from A to B and full from B to C and empty  
14 from C to A, on that basis the movement A to B would  
15 bear the full amount of the empty movement from C  
16 back to A?

17 A. That is right -- under that treatment.

18 Q. And yet wouldn't it be fair, if that were  
19 the nature of the movement, to attribute to the  
20 traffic moving from A to B and from B to C an average  
21 on the empty movement?

22 A. If that was the way the traffic --  
23 the equipment -- was being operated, I would think it  
24 would in that circumstance.

25 When we are costing in these burden studies,  
26 of course, we are dealing with every movement of  
27 boxcars and every pattern of movement all in this one  
28 complex of car movements; and we use the system ratios  
29 of empty to loaded car miles to do just exactly what  
30







1 you are saying, and if you got the empty miles you  
2 would apportion them between the two loaded movements.  
3

4 In this case here conceivably something  
5 like that might have occurred. What I mean is if you  
6 want to consider your triangular movement, why, you  
7 would have to pick up east of Armstrong and their  
8 movement down through the United States.

9 Sometimes I have found that there are certain  
10 patterns within patterns of the boxcar movement. We  
11 found that in the Transcontinental Divisions case, and  
12 we took the loaded boxcar movement moving transcontinen-  
13 tal-wise east and west and found that it had quite a  
14 different experience than the empty rate movement  
15 generally for all classes of boxcar traffic; and it  
16 was felt that inasmuch as we were endeavouring to  
17 determine the costs related to this type of traffic if  
18 we could isolate the pattern of movement attachable  
19 to that traffic we were closer to the costs incurred in  
20 that business.

21 Q. And that is the basis for taking that  
22 tracing rather than applying some sort of system average?

23 A. Yes.

24 Q. Well, now, this theory that has been used  
25 in connection with the charging, or application, of  
26 empty movement -- there was some discussion between  
27 yourself and Mr. Mauro about lumber moving out of  
28 British Columbia; as I recall the burden of the evidence  
29 he was asking you -- I don't have the page reference,  
30 but I think I could summarize this -- he was asking you





1 whether or not grain traffic was credited with any of  
2 the lumber which moved out of British Columbia in box-  
3 cars which became empty in Vancouver, having moved  
4 grain out to Vancouver, and as I recall it the answer  
5 you gave was that applying this theory of calculating  
6 empty car movements if you were costing the lumber  
7 traffic there wouldn't be any charge to it for empty  
8 movement because of boxcars being emptied as a result  
9 of grain traffic?  
10

11 A. On those particular cars I think around  
12 30 per cent or so were grain carloads terminating in  
13 Vancouver and reloading. To that extent lumber  
14 wouldn't have a charge. On the remainder of the cars  
15 they would, presumably, have to bring in empties to  
16 load out.

17 Q. When I was discussing this general ques-  
18 tion with Mr. Stenason, in this same volume which you  
19 have before you -- volume 69 -- at page 12297, at  
20 line 22, I had asked him:

21 "Developing these cost studies in other  
22 traffic, how would you treat empty movements?

23 A. We use the method I have described.

24 Q. That is this ICC method as distinguished  
25 from the allocation of prior empty movement  
26 entirely?

27 A. Yes. It would simply not be feasible to  
28 trace cars for the normal run of costing,  
29 because it is a very large job to trace  
30 3,700 cars . . ."







1                   What I was wondering about, Dr. Edwards,  
2  
3 is this: If, in conjunction with the cost study on grain  
4 traffic, the railways were also doing a cost study on the  
5 movement -- and we have seen how you charged empty  
6 movement to the grain -- and if this method were used  
7 for the computation of empty movement for lumber,  
8 wouldn't there be some element of double charging of  
9 the empty movement in the overall picture?

10                  A. There can't be any double charging because  
11 you only take into account an empty car that was sub-  
12 sequently loaded with the study traffic -- grain.

13                  Q. Perhaps I haven't put my proposition to  
14 you very clearly, but it is this: We have it that on  
15 the basis that was used lumber is not charged with  
16 empty movement?

17                  A. Under this, yes, if the car unloaded at  
18 Vancouver is reloaded at the same point with this east-  
19 bound lumber.

20                  Q. Take that as one leg of this proposition.  
21 Then, the other leg is what I took from Mr. Stenason's  
22 evidence in the passage I read to you, that in other  
23 cost studies this ICC method was used; and I assume  
24 from that that if a separate cost study on lumber  
25 movement were being made there would be some element  
26 of emptiness charged to the lumber traffic?

27                  A. Yes, there would.

28                  Q. Now, taking the two studies together, all  
29 the emptiness that is involved in the lumber trade --  
30 the lumber traffic -- has been charged to the grain





1 traffic on the basis of prior empty movement in the  
2 one study, and yet there would be an element of  
3 emptiness charged to the lumber traffic to the east;  
4 so that there might be some double charging of empti-  
5 ness? ---

6  
7 MR. SINCLAIR: Would you ask if the witness  
8 is aware that there is no empty movement in connection  
9 with lumber from Vancouver?

10 MR. CUMMING: Well, I don't know whether  
11 there need necessarily be an assumption to the extent  
12 that lumber moves out of Vancouver without prior  
13 empty movement.

14 MR. SINCLAIR: I think that is quite impor-  
15 tant.

16 COMMISSIONER GOBEIL: You mean as exemplified  
17 by Mr. Mauro?

18 MR. CUMMING: You have a grain car being  
19 emptied in Vancouver being reloaded with lumber.

20 THE WITNESS: I don't see that there is a  
21 double costing in here, for the reason that, of course,  
22 in the first place, the lumber movement doesn't  
23 necessarily end at the point where the grain empty  
24 picks this car up.

25 You are thinking here of your triangular  
26 pattern that you described earlier?

27 Q. Well, I may be spending too much time  
28 on this, Dr. Edwards, and perhaps there isn't much  
29 in it; but I am not thinking of the triangular movement.  
30 I am thinking of the movement from a point in the







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1 prairies to Vancouver with grain, discharging the grain  
2 and then picking up lumber at that point.  
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9 (Page 12964 follows)  
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A. And then, to complete your illustration, where does that lumber car end? Down in the United States some place?

Q. Let us send it back to Regina with a load of lumber and then out from Regina to some other grain point, and it will repeat the process.

A. Well, that gets into the question of -- just a moment. In the first place you have the empty movement moving eastbound -- empties moving eastbound in substantial volume out of Vancouver that came in loaded with grain. They don't all get this reloaded movement you speak of. In that case the lumber is moving in the same direction as a great number of the empties are moving.

Q. I may be getting into deep water here, Dr. Edwards. I am not concerned about the empties moving out of Vancouver. I am concerned about the loaded lumber cars moving out of Vancouver and cars that have come into Vancouver full of grain and in respect of which there would, on the application of the principles that have been used, be no emptiness charged to that lumber movement, and yet, as I understand the basis of Mr. Stenason's evidence, if lumber were being costed there would be some emptiness charged to lumber?

COMMISSIONER GOBEIL: Mr. Cumming, would an example of what you have in mind be at line 15, page 12651 of Volume 71 of the transcript?

MR. CUMMING: That is the basis of the







1 problem. That was my starting point, actually.

2 THE WITNESS: You are tying this down to  
3 lumber and I am trying to -- I can be helpful in tying  
4 the illustration down to the C.P.R. costing on the  
5 lumber movement. In the first place you don't always  
6 have the car available -- the empty car available from  
7 a reload for the outbound lumber movement. The fact  
8 that they send 20,000 empties eastbound out of Vancouver  
9 indicates that there is a substantial inability to  
10 match loads and empties at the identical time and date  
11 that the load is made empty, and that car can be made  
12 available for load. I might say on this general  
13 problem that my experience in tracing cars for specific  
14 empty movements has been in cases where there are  
15 fairly specific patterns. In other cases I have  
16 used the system average ratio of empties to loads for  
17 the type of equipment. In the cases where I have used  
18 a specific pattern it generally has been close to  
19 or below or somewhere near the general average of all  
20 the movements of that particular type of car. Also,  
21 in connection with this I endeavour to understand  
22 the behaviour of empty movements. I have made studies  
23 of all the big railroads of the United States, first  
24 grouping them by their total car miles -- loaded  
25 car miles of traffic handled. I have found that there  
26 is a heavy persistency in the ratio of empties to loads  
27 for all levels of traffic. I have also grouped all  
28 those roads by densities -- railroads that have densities  
29 of, say, two and a half million by stages on up to  
30





1 densities of ten million gross ton miles or the equiva-  
2 lent in loaded car miles, and found that as the traffic  
3 increases twofold, threefold or fourfold, the empty  
4 ratio for their equipment persists within a range of  
5 about 50 to 55 per cent. So that, as they take on  
6 additional traffic you don't always go back and utilize  
7 your empties. You keep on creating empty miles  
8 roughly in proportion to your loaded miles, which  
9 leaves me somewhat with the feeling that as traffic  
10 is added you can't always have a car to be unloaded at  
11 the point where there is another car to be loaded.  
12 There is a good deal of friction in the use of the  
13 equipment that seems to make somewhere near 50 to  
14 55 per cent standard experience of the American rail-  
15 roads, both big and little, and for all the ranges of  
16 density, with the possible exception of the big coal  
17 roads where, of course, your ratio shoots up because  
18 they are largely coal carriers, the others having a  
19 pretty broad mix of traffic.  
20

21 Q. Perhaps I can shorten this by putting  
22 my proposition, rather than tying it to lumber and  
23 specific points, in a hypothetical way and in a very  
24 short and simple one and see what you have to say  
25 about it. Suppose there is a movement from A to B  
26 of ten cars full, and a return movement B to A, three  
27 full cars and seven empties. My question really, I  
28 suppose, comes down to this: on the basis used, the  
29 movement B to A -- that is, the three full cars that go  
30 back from B to A, will move without charge for emptiness?







1 My real question is, should they be charged for some  
2 emptiness or, if they are not, should the other movement  
3 be credited?  
4

5 A. In that case, if you have ten boxcars  
6 cycling between A and B, I would take the empty move-  
7 ment for the seven cars and apportion it over the  
8 thirteen loaded cars. You have seven empty miles  
9 for every thirteen loaded miles, which is roughly  
10 about 50 per cent empty return. However, I have run  
11 into a situation where I was asked to cost out some  
12 high grade mineral moving from Mexico to certain points  
13 in the midwest on a haul of several hundred miles  
14 which required particular equipment. The cars were  
15 cycled back and forth. That equipment was largely  
16 kept in that movement or, if it was not kept in the  
17 movement, it was a very high grade of car that got no  
18 load down to the desert point and got a full load back.  
19 The question was, which should I have used: should I  
20 have used the territorial average or should I have  
21 used the empty return -- that pattern that was developed  
22 on that movement? I thought that pattern developed  
23 for that movement was a more applicable basis of costing  
24 that commodity than to use the much lower empty per  
25 cent return generated by all equipment or all boxcars.  
26 ---Short recess.  
27  
28  
29  
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1  
2 Q. Dr. Edwards, would you look at page 8 of  
3 your precis. In the top of the page you say:-

4 "Canadian National has distributed the costs of  
5 the gathering way train service on each train run  
6 to grain and other traffic on a carload basis, thus  
7 encompassing the country origin train switching  
8 service and the running service on that train run  
9 in the per carload cost applied. Canadian Pacific  
10 separated the origin gathering costs between switch-  
11 ing and running."

12 Now, I am just wondering if we could get that clarified.  
13 You are pointing out there the difference in the tech-  
14 niques used by the two railways in determining the cost  
15 of the gathering way train service. Does not what you  
16 say there mean that Canadian Pacific Railway, after  
17 developing the cost of wayside switching, deducted them  
18 from the total way freight train costs, that is to  
19 say, did they make deductions from wages, fuel and  
20 other expenses of that sort?

21 A. That is right.

22 Q. And I take it then you are satisfied there is  
23 no element of double charging of those gathering costs  
24 in the method used by the Canadian Pacific?

25 A. No, sir.

26 Q. If I could go then to the matter of switching,  
27 I just want to touch on this briefly because it has  
28 been much agitated already. Particularly with  
29 reference to the question of size of cut and its impact,  
30







1  
2 would it be fair to say that the size of the cut in  
3 connection with switching to elevators is fully taken  
4 into account because of the method of calculating the  
5 average minutes per car that are involved in this  
6 movement?

7 A. Yes, sir.

8 Q. But as I understand it, the size of the cut  
9 may be in issue in classification?

10 A. That is right.

11 Q. It would seem more logical, one would think,  
12 that single carloads would entail relatively more  
13 switching than carloads moving in multiples.

14 A. Yes, that is something not easy to demonstrate.  
15 You would have to trace the cars you are studying through  
16 a yard and the cuts in which they were kicked down the  
17 track, to ascertain that, and the length of time.

18 I understand the Canadian National has made some  
19 inquiry into that subject and maybe Mr. Bandeen will  
20 be discussing it. I think, I am sure it is very in-  
21 significant in the total picture. It is a matter of  
22 knocking off fractions of a minute in classification  
23 switching, as between a two-car cut and three and a  
24 quarter car cut on the average, something of that sort.  
25 It is infinitesimal, I think, in its total bearing.

26 Q. I see. Is the size of cut an issue in any  
27 other element of switching apart from that?

28 A. No, sir.

29 Q. Apart from classification?

30 A. No. The size of the cut was taken into account.





1  
2 Q. In all the other elements?

3 A. Yes, sir.

4 Q. And on page 10 you point out that the  
5 switching study that was conducted erred on the con-  
6 servative side; that is, to some extent anyway, under-  
7 state the full cost involved in switching the study  
8 traffic. Is the only element of conservatism that  
9 you were concerned with there that your studies were  
10 conducted during the spring and summer months and  
11 consequently do not reflect adverse winter conditions?  
12 Is the only element of conservatism the difference  
13 in operating conditions in the winter months?

14 A. Well, in as far as that sentence is concerned?

15 Q. Generally with the switching studies, are  
16 there any other aspects of them in respect of which you  
17 think they may tend to understate the amount of  
18 switching that is involved.

19 A. This observation here still holds as to  
20 way train switching which you are just discussing  
21 because the switching studies, way train switching,  
22 were based on summer conditions and the gathering  
23 service, and there had been no adjustment for winter  
24 conditions in those studies.

25 Q. Do I take it the only adjustment for winter  
26 switching conditions which was made in Exhibit 132 is  
27 in respect of the switching in yards?

28 A. Is in respect of the switching in the yards,  
29 that is right, not in the way switching.  
30







1  
2           There is the further fact that there was an  
3 adjustment made in the switching at intermediate points  
4 on train-to-train switching which reduces the factors  
5 used but which left additional minutes thus not accounted  
6 for which were not re-assigned to grain receiving or  
7 to destination handling. So there is an element of  
8 understatement there.

9           Q. In connection with the studies that were  
10 conducted for winter switching, can you tell us how  
11 the difference between winter and summer switching is  
12 measured? We had an estimate of the order of, I  
13 think, 15 per cent Mr. Stenason gave us. I am just  
14 wondering how that is calculated, how it can be  
15 measured.

16           A. Well, the experience for the winter observa-  
17 tions was weighted against the switching time for the  
18 summer operations, and a weighted adjustment provided  
19 either, it was, four months for the winter experience  
20 and eight months for the summer experience.

21           Q. Do I take it that a further study of the  
22 same sort as made up the basic switching study that  
23 was initially used, was conducted for those winter  
24 months in the yards that were studied? Is that how  
25 this was arrived at?

26           A. Additional field studies were not made, but  
27 performance data from current records in the yards  
28 were used to arrive at the relationship of engine  
29 minutes per car in winter and summer.  
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Q. Now, when you say "performance data" I am just trying to get precisely what was done, Dr. Edwards, to arrive at this 15 per cent weighting that was used to adjust for winter position. Is it an engineering study or were they time studies, just what was done?

A. Use was made of basic documents, control documents which give the engine minutes and the cars handled by periods of time.

Q. That is, just the total engine minutes involved during the winter months and the cars handled through the particular yard ?

A. It is based on counts of total cars in the yards, and those records were kept by two-week periods, total engine minutes, total cars handled in given yards by two-week periods.

Q. And those, I suppose, during the winter months, were compared against the companion records for the summer months and the differences observed?

A. That would be.

COMMISSIONER BALCH: Are you referring to classification switching?

MR. CUMMING: I am referring to this additional switching study that was done in the yards in order to arrive at the difference that should be.

COMMISSIONER BALCH: That would be classification switching in the yard, would it not? It would not be what is called industrial switching.

MR. CUMMING: This refers to, covers all yard







1  
2 operations, in time as applied to all operations during  
3 the winter.

4 COMMISSIONER BALCH: In the yard.

5 MR. CUMMING: Yes, in the yard.

6 COMMISSIONER BALCH: For classification, but it  
7 would not have anything to do with industrial switching.  
8 You would not mix that up with classification, the  
9 industrial switching.

10 MR. STENASON: The adjustment would cover both  
11 industrial and classification.

12 COMMISSIONER BALCH: Would cover industrial as  
13 well?

14 MR. STENASON: Yes.

15 MR. CUMMING: Does that clarify the matter for  
16 you, Mr. Balch?

17 COMMISSIONER BALCH: Yes.

18 MR. CUMMING: Perhaps if we could turn to page 11,  
19 Dr. Edwards, you say in the second paragraph there

20 "Tests conducted by Canadian Pacific indicate  
21 that the periods of Western grain car peak  
22 loadings coincide with the periods of peak  
23 loadings of box car traffic generally."

24 I take it that that box car traffic generally means  
25 box car traffic including grain, does it?

26 A. Yes.

27 Q. Does the peak of grain car loadings coincide  
28 with the peak of non-grain box car loadings as dis-  
29 tinguished from the peak of box car traffic generally?

30 A. Yes, the peaks pretty well coincide.





1  
2 Q. Are these peaks broken down into regions?

3 A. No, they are not. This is a system figure.

4 COMMISSIONER BALCH: Mr. Cumming, would you mind  
5 just a minute. I would like to go back to that again.

6 MR. CUMMING: Back to switching?

7 COMMISSIONER BALCH: Yes, to switching. Are  
8 you discussing the grain now, just the grain study or  
9 all switching in the yard? Is it just grain you are  
10 talking about in this study, Mr. Cumming?

11 MR. CUMMING: As I understand it, Mr. Commissioner  
12 Balch, and perhaps I can tell you my understanding and  
13 then if I am off the rails here we can be corrected:  
14 as I understand it the switching studies involve all  
15 the switching, and then that which is attributable to  
16 grain is extracted from them and applied to the study  
17 traffic. I had assumed in the question that I  
18 was asking Dr. Edwards about this adjustment, that the  
19 further studies that were conducted would be studies  
20 of switching in the winter conditions generally; then,  
21 having derived what they have expressed as a percentage  
22 difference, that then that was applied to that portion  
23 of the grain switching which was done during the  
24 winter.

25 COMMISSIONER BALCH: Thanks very much.

26 MR. CUMMING: That is my understanding, and  
27 perhaps if Mr. Stenason can tell us whether we are  
28 right or not.

29 MR. STENASON: Yes, that is correct.  
30







1

2 MR. CUMMING: Q. Now, you had told me,

3 Dr. Edwards, that these two peaks, that is, grain and  
4 non-grain, and the box car peak generally, were  
5 coincidental. I am wondering, Dr. Edwards, what the  
6 significance in this whole precis is of the reference  
7 to peaking. What impact does it have on the cost  
8 of the grain traffic generally?

9 A. It does not have any specific effect on the  
10 change in the figures. There are no additional  
11 expenses set out because of this. It goes fundamentally  
12 to the variability of the supply of cars required to  
13 handle the traffic.

14 Q. Can you give us some idea of the extent to  
15 which the box car fleet would be reduced if there were  
16 no grain traffic?

17 A. I could not. Well, my belief is that it  
18 would be reduced at least in proportion to the car  
19 miles grain generates in relation to the total car  
20 miles generated by all traffic. In other words,  
21 100 per cent related.

22 Q. Now, I had asked Mr. Stenason then  
23 and I would like to have your views on this same point:  
24 would there be any case to be made for charging against  
25 the grain traffic the total cost, capital cost,  
26 the entire cost in that sense, of what might be  
27 described as solely or 100 per cent related equipment?

28 A. Yes.

29 Q. Is that done in any of the American roads with  
30





1  
2 which you are familiar?

3 A. If I understand your question right, that is  
4 done in all costing except where there is some averaging  
5 out of the maintenance, averaging out of operating  
6 expenses at this 80 per cent level. Now, are you  
7 talking about the capital costs of the cars or repair  
8 costs to the cars?

9 Q. I am talking about everything that might be  
10 related cost-wise, capital or current operating or  
11 however it may be described, to the box car fleet and  
12 the locomotives and all that equipment that the railways  
13 have in excess of what they would ordinarily have if  
14 they did not have any grain traffic?

15 A. Well, I think it is all 100 per cent variable  
16 with the grain traffic -- does that answer your  
17 question? -- both the ownership and the repairs,  
18 depreciation.

19 Q. Now, I understand from the answer that Mr.  
20 Stenason gave me when I asked him this question that that  
21 was not the method used in carrying out this cost  
22 study. What I am putting to you is, is there a case  
23 to be made for doing it and what impact would it have  
24 on the result of the cost study?

25 A. Well, let me see if I understand your basic  
26 question now. What would be the impact, Mr.  
27 Cumming, of doing what? We have treated all these  
28 costs as 100 per cent related to grain. We have  
29 treated the car mile costs and the car day costs  
30





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Edwards, cr-ex  
(Cumming)

12983

as 100 per cent related to the car miles and car days  
consumed in the handling of the grain traffic.

---Page 12984 follows.







1  
2 Q. Now, I found the spot where I put this to  
3 Mr. Stenason, and perhaps this might clarify the  
4 situation. If you refer to Volume 69 at page 12293,  
5 starting at line 9.

6 I think I have got off the rails with you, Dr.  
7 Edwards, and perhaps I can bring us back onto them  
8 if I say that the context here is in connection with  
9 peaking. Does that help?

10 A. Yes.

11 Q. Now, my question then is: would there be  
12 any basis, any justification, in your view, for  
13 charging the full cost of that excess capacity required  
14 because of peaking considerations of the grain trade?

15 A. I think it might well be.

16 Q. What sort of an impact would it have on the  
17 result of this study?

18 A. I have never figured that. We haven't  
19 worked out the dollar amount, except that there would  
20 be an added cost because of that peaking factor.

21 Q. And in your opinion, Dr. Edwards, do you  
22 think that that might be properly done and, in doing  
23 so, would it be consistent, in a proper cost analysis  
24 of this traffic?

25 A. I think it would be.

26 Q. And so I suppose to that extent the study  
27 once again is on the conservative side?

28 A. That is correct.

29 Q. Is it done in any of the American roads with  
30 which you are familiar?





1  
2 A. I don't recall specifically, except that we  
3 have run costs for particular types of equipment that  
4 they have limited use based upon their experience,  
5 but I haven't done that in the case of the broad groups  
6 of equipment.

7 Q. As in specialty fleets?

8 A. Yes.

9 Q. And those are the only areas in which that,  
10 to your knowledge, is done?

11 A. Yes.

12 Q. I want to talk to you for a moment about non-  
13 revenue freight on page 12. You point out about a  
14 third of the way down the page:

15 "Non-revenue freight was first apportioned  
16 between freight and passenger on a gross ton-  
17 mile basis."

18 I was wondering, Dr. Edwards, whether there is  
19 anything to be said for the proposition that as passenger  
20 service requires higher maintenance standards this  
21 might not be an entirely fair method of apportioning  
22 O.C.S. freight as between passenger and freight. Do  
23 you have any views on that?

24 A. Well, I have never considered that, never  
25 thought the refinement was -- the point never was  
26 raised before, and I don't recall making any such  
27 adjustment.

28 Q. If a distribution as between passenger and  
29 freight is reasonable when done on a gross ton-mile  
30 basis, why not break non-revenue freight applicable to







1  
2 the study traffic as against the non-study traffic down  
3 on the same basis.

4 A. That is the way it is usually done. In this  
5 case here the carriers costed out, as you know, the  
6 non-revenue freight based on the unit costs which are,  
7 I believe, lower than you would obtain using gross  
8 ton-mile apportionment of expense, because this traffic  
9 is -- non-revenue traffic is usually lighter.

10 Q. Do you have any comments on the propriety  
11 of doing it in the way in which it has been done as  
12 compared to what you say is the ordinary way of doing  
13 it?

14 A. It would produce more conservative costs  
15 than the usual method.

16 Q. I appreciate that. Which brings a result  
17 closer to the true cost of moving the study traffic,  
18 which method?

19 A. I think the gross ton-mile basis would be  
20 closer to the true cost.

21 Q. Can you tell us the reason, then, why this  
22 more conservative method was adopted? Is it just an  
23 effort to be conservative, or is there some better  
24 justification for it than that?

25 A. I presume it is an effort to be conservative,  
26 but I will check here. I raised this question with  
27 the carriers. Well, I am informed that there is an  
28 answer to this, that the carriers do not have the  
29 ton-miles of non-revenue freight -- loading, rather,  
30





1  
2 of the non-revenue freight.

3 Q. It is lack of data which prevented them doing  
4 it on the other basis.

5 A. Yes. However, they could have costed it  
6 just on an average gross ton-mile basis.

7 Q. Do you think that would be as fair to  
8 the study traffic as the method used, or as more  
9 accurate -- put it that way.

10 A. Well, the most accurate way would be to cost  
11 it based on the actual loading of the non-revenue  
12 traffic.

13 Q. That is the American practice?

14 A. Yes, that is the American practice.

15 Q. And this is the next best thing, I suppose,  
16 this method?

17 A. Yes, I would say so. Yes, I would say it is  
18 Rail Form A Practice, but that requires that you deter-  
19 mine the loading of the non-revenue freight, and a  
20 great many studies are made without making that effort.

21 Q. On page 14 you speak of some tests which  
22 were conducted for track maintenance expenses, and  
23 you tell us that there was a field study conducted for  
24 branch line subdivisions and that the results obtained  
25 showed a comparison between actual expenses and the  
26 expenses calculated by the regression analysis with a  
27 difference of only 4 per cent between them. I am  
28 just wondering if you would develop that a bit, Dr.  
29 Edwards, and give us some idea of the precise sort of  
30







1  
2 tests which were conducted in this field study and  
3 what was looked at, and so on.

4 A. What was looked at was the actual main-  
5 tenance expenses over a large number of branch lines,  
6 the very large branch line mileage, for which the  
7 expenses were developed, and those expenses laid against  
8 the size variable developed in the regression analysis.

9 Q. And you point out the range of error was  
10 in the order of 4 per cent. Were both heavy and light  
11 density lines included in the branches which were  
12 examined?

13 A. That is right.

14 Q. Was there any variation as between them, any  
15 distinction between them in the variation found between  
16 actual expenses and the expenses developed through the  
17 regression analysis?

18 A. No, there was not any variation between them.  
19 Of course, the densities on any branch line by any  
20 standard are very light.

21 Q. And were all the subdivisions that were  
22 examined light density branch lines, by definition?

23 A. They were all the branch lines in the Prairie  
24 region.

25 Q. Would it have been possible to conduct similar  
26 studies on the main line or portions of it? Does it  
27 lend itself to that sort of examination?

28 A. No, sir. You are trying to find lines that  
29 have a very minimum of density.  
30







1  
2 Q. Were you able or were the railways able  
3 generally in connection with the study to test pre-  
4 dicted against actual results in other areas of the  
5 cost analysis?

6 A. Well, the results from the regression  
7 analysis themselves, of course, were plotted back  
8 against the actual results. But you are not talking  
9 about that type of a test; you are talking about where  
10 you went out in the field, as it were, and found actual  
11 accounting data, operating data, that would provide  
12 the tests.

13 Q. Yes, similar tests to the ones you referred  
14 to here for track maintenance expenses. Were any  
15 other families of accounts tested in that same way?

16 A. The size variable for investment was similarly  
17 tested; the station expenses were tested, and the  
18 yard expenses were tested.





1  
2 Q. Now, in each of those cases can you  
3 give us some idea of the results that were found --  
4 that is, the companion figures -- on the percentage  
5 of error that you found in the field studies used to  
6 test track maintenance expenses?

7 You told us they were within 4 per cent  
8 predicted to actual, as I understand what is contained  
9 here?

10 A. Yes; we will have to develop that.

11 Q. I think it might be of some interest  
12 to find...

13 A. Yes.

14 Q. ...from you what sort of results you  
15 got in these other field studies that you were able  
16 to conduct to test the techniques of cost study and the  
17 range of error, or the degree of accuracy -- I  
18 suppose that is another way of putting it -- in those  
19 studies.

20 Now, the other day when Mr. Mauro was cross-  
21 examining you, Dr. Edwards, there was some discussion  
22 between you about this question of per cent variability,  
23 particularly on the matter of maintenance of equipment  
24 expense, and I think he was addressure his mind  
25 particularly to Exhibit 64.

26 MR. SINCLAIR: What is the page number?

27 MR. CUMMING: I don't have the page  
28 reference. I was just drawing the witness's attention  
29 to the subject, rather than what was said.

30 MR. SINCLAIR: I wonder if you would clear  
it up, because this obviously is something that  
requires re-examination.







1 MR. CUMMING: My friend is being helpful  
2 again. I don't know whether I can clear it up or not;  
3 but I might be able to clarify some area here.

4 Q. As I recall what was being discussed  
5 and the general burden of your evidence, Dr. Edwards,  
6 it was something of this sort, that those expense  
7 items which are properly styled "Maintenance of  
8 Equipment expense" are, in your opinion, 100 per cent  
9 variable with traffic with the exception of, I think,  
10 two items which you mentioned -- work equipment, and  
11 one other -- superintendence and overhead and work  
12 equipment. "The level of all groups of Maintenance  
13 of Equipment expense, with the exception of Superintend-  
14 ence and Overhead and Work Equipment varies completely  
15 with traffic." That appears at the bottom of page  
16 16 of your precis.

16 Now, you will recall that Mr. Mauro had  
17 put before you some of the per cent variables from  
18 the I.C.C. study and he was challenging your statement  
19 that this branch, or this family, of expense is 100  
20 per cent variable, and you had pointed out to him that  
21 the 80 per cent variable in this family of accounts,  
22 which you have used as a general rule-of-thumb figure  
23 in the States, is a general average including  
24 superintendence and work equipment and, perhaps, some  
25 other items. I am not sure what other items there  
26 might be in it.

26 I am just wondering if we could get from  
27 you, with reference to Exhibit 64, an estimate of the  
28 percentage of variability in this whole family of  
29 equipment maintenance expense, including those items  
30 which are not 100 per cent variable, so that we can





1  
2 have them on the same comparable basis as the figures  
3 from the ICC study.

4 If this is not a possible or practicable thing,  
5 say so, and I will leave it; but if it is possible  
6 so that we could get things on this like-to-like  
7 basis, then, perhaps it might be helpful.

8 A. The Canadian National Railway has worked out  
9 the percentage variable for the total maintenance of  
10 equipment accounts to be 91.295 per cent.

11 Q. Now, would the Canadian Pacific per cent  
12 variability in this family of accounts be of the  
13 same order?

14 MR. STENASON: I would have to check it.

15 MR. SINCLAIR: We can make the calculation and  
16 put the figure in.

17 MR. CUMMING: That would be fine. The  
18 Canadian National one is good enough.

19 Q. This 90 per cent figure which you have  
20 given me -- is that substantially on the same basis  
21 as the 80 per cent figure which, you say, prevails as  
22 an average in the United States?

23 A. No; we are not talking about the same thing.

24 Prior to the development of Rail Form A, which  
25 was a latecomer in the family of formulas, we used  
26 the ICC for costing. We first used the 80 per cent,  
27 but prior to that time, when we were called upon to  
28 make refined studies, we applied a per cent variable  
29 between individual accounts, and we used 100 per cent  
30







1  
2 for all maintenance expenses for equipment -- freight  
3 train cars and locomotives -- and we used some 50 per  
4 cent, or a little higher, as the general average exper-  
5 ience for maintenance of way. Fuel was taken at 100  
6 per cent, and so were train crews. Other percentages  
7 were taken for traffic in general and so on.

8 When we combined all the results of these various  
9 percentages we ran a simple regression analysis against  
10 all the accounts in total as well as individual observa-  
11 tion. We found the expenses in their total were  
12 between 80 and 90 per cent variable.

13 Now, we found in these large individual studies  
14 that they were overwhelming the staff on the Commission  
15 and, to some degree, putting a very heavy burden on  
16 the railroad running these studies; they always took  
17 at least a year to make, and they were very costly.  
18 At the same time we were getting requests in freight  
19 cases for the out-of-pocket cost level, or the full  
20 cost level on occasion, for a great deal of traffic.  
21 We found it necessary to cease trying to find the  
22 per cent of variability of the individual account and  
23 making the detailed studies which were made by train run  
24 by train run and yard by yard, and it was decided in  
25 that case, with this range before us of 80 per cent to  
26 90 per cent as variable, that we would take a flat  
27 80 per cent factor, with this full explanation, and  
28 use that without endeavouring to separate the individual  
29 account; but the Rail Form A, however, carries within  
30







1  
2 its instructions the fact that if refinements are  
3 desired one should go out and apply the direct expenses  
4 for each account based upon its own individual per cent  
5 variability. You have that alternative now within  
6 the framework of Rail Form A.

7 Then we had Rail Forms B and C. They were sub-  
8 sequently numbered after the B and C had been on an  
9 application. We hadn't given them any numerical number  
10 or identification.

11 So that you have the application of costs for  
12 refined cases using per cent variables which are  
13 different for each account over the flat 80 per cent.  
14 The 80 per cent is a composite across-the-board. You  
15 have picked up the 90 per cent on maintenance of  
16 equipment and you are saying is this comparable. This  
17 90 per cent is buried in the 80 per cent along with  
18 the 50 per cent for the large maintenance of way account.  
19 Add them all together and they sum up to 80.

20 Q. So any comparison of the American figures  
21 with the ICC figures is really comparing apples and  
22 oranges, and this, then, is a marriage of a series of  
23 individual ...

24 A. It is a short-cut device.

25 Q. On page 17 of your precis, dealing again,  
26 for the moment, with this question of equipment super-  
27 intendence and overhead, you say:

28 "The unit of variable cost for expenses in the  
29 group 'Equipment Superintendence and Overhead'  
30





1  
2 was prorated by Canadian National and developed  
3 by regression analysis by Canadian Pacific."

4 I wonder if you could tell us what advantages there are  
5 as between these two methods and why one railway used  
6 one technique and the other a different one.

7 A. I think that it is a matter of the individuality  
8 of the people making the studies -- but I will inquire.

9 It is a better answer than I recalled. The  
10 Canadian National didn't get satisfactory regression  
11 formula results and the Canadian Pacific did; so  
12 on that basis the railroads did as they did.

13 Q. So the proration was, I take it, a second  
14 choice so far as Canadian National was concerned as a  
15 technique for developing the unit variable cost in  
16 this group?

17 MR. McDONALD: First choice.

18 MR. CUMMING: Q. Perhaps second in point of time.

19 A. You can label it that way if you desire, but  
20 I have used the prorate on the superintendence item  
21 and general items throughout the whole group of main-  
22 tenance equipment and maintenance of way account for  
23 long years; so that is the standard way to treat it.

24 Q. My point is simply this: Are you disturbed  
25 that different techniques were used and are you con-  
26 cerned that in the one case, by the application of one  
27 technique, an unsatisfactory result was obtained and  
28 that they had to use another? Does that affect your  
29 opinion of the ultimate result?

30 A. It doesn't affect my opinion of the ultimate







1  
2 result; these are relatively minor items.

3 Q. On page 20, in the second paragraph, you  
4 say:

5 "By treating certain accounts that have some  
6 variability as constant, a conservative method  
7 has been adopted and the variable cost chargeable  
8 to the study traffic in the cost studies of  
9 Canadian National and Canadian Pacific have  
10 understated such costs."

11 What accounts are you talking about here?  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30





1 Are these the ones listed on the previous page -- re-  
2 moving snow, ice and sand? I read you a paragraph  
3 on page 20.  
4

5 A. Oh, I see.

6 Q. And I want to get from you the accounts  
7 that are referred to there. At the bottom of the  
8 previous page you mention removing snow, ice and sand,  
9 and I am wondering what other accounts are involved?

10 A. I believe the item is snow, ice and  
11 sand.

12 Q. Is there just that one?

13 A. Well, we have vessel operations; these  
14 items are listed on the preceding page -- snow, ice and  
15 sand. Maintenance of vessels, which are treated  
16 as not applicable to the study traffic although the  
17 cost of handling the traffic on the Canadian National  
18 moving to export elevator at Victoria should be  
19 charged to the study traffic. So, we would have  
20 those two items.

21 Q. What I really wanted to come to was this,  
22 Dr. Edwards: you say that by treating some of the  
23 items that may have some variability as constant,  
24 there is a conservatism in the study because the  
25 variable cost is to some extent understated and, of  
26 course, that would also result in a smaller amount of  
27 constant cost being attributed to the study traffic?

28 A. That is right.

29 Q. The proportions?

30 A. That is right.





1 Q. Would it be fair to assume, Dr. Edwards,  
2 that if in examining some of the accounts the railway  
3 people were unable, through the application of  
4 regression analysis techniques or any of the other  
5 apportionment methods used to develop variable cost --  
6 would it be fair to assume that if they had been  
7 unable to develop a variable cost that those costs  
8 are, in their very nature, constant rather than  
9 variable?

10 A. I am not certain that that would be the  
11 case. It may be a problem of inadequacy of data by  
12 which to get a cross-section analysis.

13 Q. Would that be the explanation, do you  
14 think, in each instance where the railways found them-  
15 selves unable to identify the variability of any  
16 particular accounts?

17 A. Taking snow, ice and sand, the basic  
18 problem there was finding an adequate output variable  
19 with which to relate the removal of snow, ice and sand.

20 Q. Is that, then, a problem resulting from  
21 lack of data? Is that what you mean -- or, is it  
22 that snow, ice and sand -- because, certainly, snow  
23 and ice and quantities involved are more acts of God  
24 than anything else? I suppose it is reasonable to  
25 assume that snow and ice would not vary with any  
26 output unit that you could think of? Is that a fair  
27 assumption?

28 A. Yes -- snow on the tracks would vary  
29 with the snowfall.  
30







1 Q. That was the assumption I was making.

2 A. But, dealing with the cost of removal  
3 of the snow and the pressure to remove snow and ice  
4 is greater on tracks of high density than it is on  
5 tracks of very low density or tracks with infrequent  
6 service. So, the expenditure of money and funds to  
7 keep main lines open would be greater per mile of  
8 track for given inches of snow than it probably would  
9 be on the branch line where the maintenance of the  
10 scheduled service is not so demanding.

11 Q. Well, as long as you have one train a  
12 day I suppose the snow has to be removed?

13 A. Many branch lines probably average two  
14 or three trains a week as a whole, and you don't have a  
15 matter of several scheduled freight and passenger  
16 trains having to get through within some reasonable  
17 time schedule.

18 Q. If the cost of snow removal were really  
19 variable with density, say, of trains, wouldn't one  
20 have expected that some correlation would show up?

21 A. Well, it appears that the carriers were  
22 unable to find the basis for treating that. That is all  
23 I can give you.

24 MR. CUMMING: Mr. Chairman, I haven't made  
25 quite as much progress as I thought I would. I am not  
26 going to be very much longer, but Dr. Edwards has  
27 certainly had a long day, and I would not finish in  
28 less than ten or fifteen minutes.

29 THE CHAIRMAN: Well, we will adjourn until  
30 ten o'clock tomorrow morning.



*Hon. C. P. Miller*

# ROYAL COMMISSION

ON

## TRANSPORTATION

HEARINGS

HELD AT

OTTAWA

VOLUME No.:

DATE

74

2 JUNE 1960

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I N D E X

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Mr. Gobeil

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NO EXHIBITS IN THIS VOLUME

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ROYAL COMMISSION ON TRANSPORTATION

Proceedings of hearings held in  
the Court Room, Board of Transport  
Commissioners Offices, Ottawa,  
Ontario, on the 2nd day of June,  
1960

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Ottawa, Ontario,  
Thursday,  
June 2nd, 1960

---On commencing at 10.00 a.m.

THE CHAIRMAN: Order, please.

CROSS-EXAMINATION BY MR. CUMMING (Cont'd):

Q. Dr. Edwards, there are just one or two short points that are left that I want to deal with.

Would you look at page 21 of your precis. In the third paragraph you say:

"The difference in regard to property taxes" -- that is the difference in the treatment of the two railways --

"arises from the fact that Canadian Pacific has included taxes arising from solely related facilities and a portion of taxes for the balance of the plant. Canadian National has not included taxes on the balance of the plant." Can you explain why there is that difference in the treatment as between the two railways?

A. The explanation of the Canadian National Railways as to the elimination of taxes other than on solely related lines was they felt they lacked an adequate method of separating those expenses between constant and variable. They believe, however, that some of them are variable, but they felt they didn't know how to do it in the manner ---







1 Q. A problem arising from lack of data?

2 A. Yes.

3 Q. And I suppose, then, in your opinion that  
4 result in the Canadian National study having a further  
5 element of conservatism?

6 A. Yes, sir.

7 Q. Now, just dealing generally with the  
8 question of conservatism, Dr. Edwards, it appears from  
9 place to place in the precis which you have put in that  
10 in one respect or another studies are on the conser-  
11 vative side, and perhaps for convenience generally and  
12 in order that we can have these collected together in  
13 one place, could you just catalogue the main areas in  
14 respect of which you say these studies are conservative  
15 and perhaps give us some rough idea of the amounts that  
16 may be involved?

17 A. Speaking first for the Canadian Pacific  
18 Railway, I have a number of items and the approximate  
19 amounts involved as to the treatment of constant costs.  
20 I mention that because the basis used gives a more con-  
21 servative basis than I have used in the past; in other  
22 words, a percentage contribution of the expenses rather  
23 than ton and ton-miles. If the ton and ton-mile basis  
24 had been used that would have increased the constant  
25 expenses by some \$11 million.

26 Turning now to the variable expenses, the  
27 treatment of non-revenue freight which I spoke about  
28 yesterday in answer to your question resulted in the  
29 understatement of some \$175,000. The item of  
30





1 locomotive repair expenses was treated on the locomotive  
2 mile basis rather than on a unit mile basis, with the  
3 higher proportion of unit miles per locomotive miles in the  
4 west than in the east, which approximated some \$100,000  
5 in understatement. The failure to ascertain detours  
6 in the handling of traffic, degrees of circuitry in  
7 the movement of traffic and operating exigencies not  
8 taken into account would approximate some \$80,000. The  
9 failure to adjust for winter switching by the road  
10 train switching as apart from yard switching would have  
11 an effect of some \$26,000. The reduction in the train  
12 to train switching time at intermediate terminals,  
13 giving the switching a lower minutes per car, and the  
14 failure to pick up those minutes in the yard and  
15 reapportion them to local grain switched in those  
16 terminals, resulted in an understatement approximated  
17 at \$34,000. The failure to allow for the fact that  
18 the diesels on the Canadian Pacific are well below  
19 their average, eventual average life, in other words,  
20 are relatively new and obtain their normal maintenance  
21 costs, was estimated at \$233,000.

22  
23 There was no allowance for increased wages  
24 in 1959 for the running trades of  $9\frac{1}{2}$  per cent and for  
25 the non-ops of 3 per cent, the effect of which is applied  
26 to the labour costs in the grain study which have in-  
27 creased those costs by \$1,100,000 approximately.

28 In the case of money, there is no recognition  
29 of the fact that in 1959 the corporate income tax rate  
30 was increased from 47 per cent to 50 per cent, which







1 would have had the effect of increasing the cost of  
2 money by approximately \$680,000.

3 There was no allowance for the increase in  
4 1959 in the sales tax on materials and supplies, a  
5 10 per cent increase. If that had been taken into  
6 account in the grain study it would have increased the  
7 cost by approximately \$78,000.

8 Now, those figures, excluding the \$11 million  
9 on the constant costs, add up to slightly over \$2½  
10 million. There are certain, a few other items  
11 which were more difficult to evaluate but, nevertheless,  
12 had the effect of making the cost conservative.

13 No heavy repairs were performed on steam  
14 engines on the Canadian Pacific in 1958, yet whatever  
15 costs were incurred were included in the study. Further-  
16 more, as to the car repairs, the maintenance, mechanical  
17 people of the C.P.R. feel that the heavy-loading grain  
18 cars effect more wear and tear and damage upon the cars  
19 than the average traffic does because of such loading.  
20 No estimate was made of that.

21 There was an increase on the unemployment  
22 insurance taxes in 1959. No estimate was made of that  
23 item.

24 Turning to the Canadian National, they have  
25 costed out the grain traffic based on the ratio of  
26 empty car miles to loaded car miles based on a study  
27 of the prior empty car movement rather than the sub-  
28 sequent empty car movement. There has been discussion  
29 as to why one was used in lieu of the other in the way  
30





1 that has been treated or whether some combination might  
2 not be used. If they had used subsequent empty car  
3 movements, they estimate their increased variable costs  
4 at \$900,000 and the prorate of the constant cost of  
5 \$600,000, or an increase in the total cost against the  
6 grain of a million and a half dollars.

7  
8 The Canadian National based their allowance  
9 for pensions upon the projected study, using a factor  
10 of 6 per cent of their payroll. However, they report  
11 that actually they are now paying  $9\frac{1}{4}$  per cent. The  
12 6 per cent was projected in the eventual future when  
13 contributions made by employees takes effect. However,  
14 the present rates are so much higher than that that if  
15 they had used the current rates they would have had an  
16 increase on their variable cost of \$550,000, the  
17 constant cost of \$260,000 and the fully distributed cost  
18 of \$810,000. That being their present cost of pen-  
19 sions, the question being it was a practical matter, will  
20 they ever get it down to 6 per cent. But currently  
21 this is what they are paying.

22 Their non-revenue studies of what they call  
23 their OCS material, movement of traffic which is in  
24 company service, when developed for their prairie  
25 regions for the calender year failed to account for  
26 certain time lags in the reporting of those movements.  
27 They also did not reflect the additional cost east of  
28 the prairie in handling traffic of that character,  
29 non-revenue traffic moving through the prairie regions  
30 for use therein, and, of course, deducting any OCS





1 material generated in the prairie regions but moving  
2 eastward to be used in the eastern regions. On  
3 allowances for the movement of OCS material through  
4 one territory for use in another territory and picking  
5 up the time lag and reporting, they have an increase  
6 in their variable cost of \$300,000, constant cost of  
7 \$200,000, fully distributed of one-half million dollars.  
8

9 They have made an estimate of the effect of  
10 the cost of winter switching, placing the variable  
11 costs with an additional \$200,000, a constant cost  
12 of \$130,000, and the fully distributed cost of \$330,000.

13 In the Canadian National costing on grain  
14 traffic they handle the grain traffic both in their  
15 heavier weight drag freights and also some of the grain  
16 traffic in their so-called symbol trains or manifest  
17 trains. They costed all the grain traffic at their  
18 drag freight level to the extent that they did not use  
19 up more gross ton miles than they had drag freights  
20 on their other segment of their train runs.  
21

22 (Page 13017 follows)  
23  
24  
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30







1 That, of course, did not allow for any movement in the  
2 other trains, so that to that extent they have been  
3 conservative in their costing. I have already  
4 mentioned their treatment of their property taxes.  
5 Another element of conservatism ---  
6

7 Q. Excuse me, Dr. Edwards. Are there any  
8 numbers to set opposite those last two you have men-  
9 tioned or are those ones which are in the category of  
10 difficult to evaluate?

11 A. I think Mr. Bandeen may be able to add  
12 to these, he may well talk on this. However, you  
13 asked me to set down these in one place, time and  
14 place of the estimates, so that is why I am doing this.

15 Q. That is fine.

16 A. He may amplify the subject matters in  
17 their costing. The Canadian National trains, through  
18 freight trains, at the end of their runs or at inter-  
19 mediate junction points, do some switching and picking  
20 up grain cars at those junction points. There was no  
21 effort to detail that car switching, and there is a  
22 significant amount of this junction point switching  
23 performed by these road engines and for which they  
24 are paid extra; but no attempt is made to make time  
25 studies, so those costs were not included in the study.

26 There is also the cost of the barge move-  
27 ment from Port Mann to Victoria. The movement con-  
28 sisted in the period of study of over 1,300 cars,  
29 loaded cars and the attendant return to the empties.  
30 There was no clear-cut method of determining the variable





1 proportion of such barge movement, and no attempt was  
2 made to include it.

3 In their costing procedures the C.N.R.  
4 constructively developed the number of locomotives,  
5 road and yard, whose annual effort was consumed  
6 entirely in the handling of grain. This is a con-  
7 structive basis. There was no effort here to fraction-  
8 alize these costs, fractions by locomotive. They  
9 stopped on the short side of whole units. They  
10 estimate they understate their variable cost by 8,000,  
11 constant by 5,300 and the fully-distributed by 13,300.

12 They did not make any endeavour to develop  
13 the cost of the removal of snow, ice and sand. Part  
14 of this expense they feel would be particularly incurred  
15 on the solely related lines, removal of snow and  
16 removal of the sand.

17 The Canadian National Railways separates  
18 these traffic expenses between freight and passenger  
19 and pick up the freight expense portion, and in there  
20 apportioned the freight portion of the expenses back  
21 over to total expenses, freight and passenger, rather  
22 than allocating it to freight only with a pro rata part  
23 to grain.

24 A rough estimate of the effect of the  
25 correction is that the variable cost would be increased  
26 by \$150,000, the constant cost by \$100,000, and the  
27 fully distributed cost by \$250,000.

28 The Canadian National also have a number of  
29 terminals where switching is not normally carried out  
30







1 on cars that move through. However, at all of these  
2 terminals a small percentage of the through cars are  
3 switched because of bad order, the operation of  
4 odd turns to that point and the reduction of through trains  
5 to pick up speed loads. It was not deemed worthwhile  
6 to conduct special studies to determine the amount of  
7 the grain traffic that was affected.  
8

9 The terminals at which this situation would  
10 exist are Fort Francis, Portage la Prairie, Saskatoon,  
11 Melford, Moose Jaw and Drumheller. It was not possible  
12 to estimate the effect of this conservatism.

13 In their treatment of freight claims, the  
14 Canadian National included the direct expenses for  
15 claims, did not include any portion of the office  
16 expense of the Claim Department that should be charged  
17 to grain. They did not find it readily possible to  
18 separate out this item of the accounts.

19 That is the list of items I have. If I did  
20 not give you a number, there was no specific estimate  
21 of dollars.

22 Q. I appreciate that, Dr. Edwards. I  
23 suppose that, having regard to this list, that it might  
24 be fair to say -- I am sorry.

25 A. Mr. Bandeen points out that I had  
26 listed certain labour increases and cost increases  
27 of the C.P.R. such as the wage increases for the running  
28 trains and non-ops of  $9\frac{1}{2}$  and 3 per cent respectively,  
29 and I presume the sales tax. Those would also apply  
30 to the Canadian National.





1 Q. And unemployment insurance?

2 A. That is right. I think these items on  
3 this C.N.R. for which I have given moneys, I believe  
4 they exceed three million, but you have the figures.  
5

6 Q. We have the numbers now. I suppose  
7 then, Dr. Edwards, that if today or tomorrow or next  
8 year you were to conduct another cost study of the  
9 railways, as a cost analyst, you could justify the  
10 inclusion in such a cost study of some or all or some  
11 combination of these various items that you have  
12 referred to.

13 A. Yes, they all appropriately belong in  
14 the study.

15 Q. And to that extent then I guess it might  
16 be fair to describe the study that has been presented  
17 as a cost study rather than the cost study, if there  
18 is to be any distinction or any controversy over that.

19 A. No, I would describe it as the cost  
20 study, in that I think, however you define a cost study  
21 or the cost study -- meaning the most appropriate and  
22 precise study available in time and effort -- you always  
23 have adjustments for changes in wage levels and price  
24 levels, but it does not go to the definition of a cost  
25 study or the cost study. When I am speaking of the  
26 cost study, I am thinking of a study where there has  
27 been made an all-out effort to reflect, first conceptually  
28 and then arithmetically, the costs of handling the  
29 traffic in question within the limits of man's efforts  
30 and understanding -- and when I say "effort" I mean







1 substantial expenditures of effort, not putting a  
2 hundred million of dollars of costs into a study but  
3 putting, as cost studies go, very large amounts of time  
4 and effort.

5 This study, I think, ranks very high near  
6 the tops or maybe at the tops of all studies made.

7 Q. Just let me ask you this, Dr. Edwards.  
8 How would you describe these differences or adjustments  
9 that may be made in what you have catalogued today?  
10 Are they arithmetic or are they in some instances con-  
11 ceptual?  
12

13 A. I don't think they are conceptual.  
14 Some of them are arithmetic to the extent that there  
15 are errors, that is one thing.

16 Q. Apart from errors, what I have in mind,  
17 you talk about increased rates, increased income  
18 tax for C.P.R., things of that sort, and those things  
19 seem to be obvious arithmetic adjustments.

20 A. Oh, yes.

21 Q. The concept is that they are included in  
22 the basic cost study, income tax and wages. Now,  
23 if the rates change, then you change the numbers.

24 A. Yes.

25 Q. But what about things such as costing  
26 locomotive repairs on the locomotive mile as against  
27 unit mile, is that a conceptual difference or is that  
28 what you describe as an arithmetic difference?

29 A. It is not conceptual broadly. It is  
30 a matter of the extent to which you can make refinements.







1 The C.P.R. does not apparently keep a record of its unit  
2 miles.

3 Now, in refined studies I have made in the  
4 past, I have used locomotive miles assigned directly  
5 by trains. When the diesels came into being and  
6 the I.C.C. statistics required the railroads to main-  
7 tain their records by units, why, then when we wanted  
8 to refine the studies for the locomotive power, we  
9 turned to the use of the unit miles which were already  
10 available.

11 The C.P.R. has now provided an indication of  
12 what the effect would be if they had turned to  
13 unit miles.

14 I would like to leave this thought with you.  
15 Newer studies and increasing detail of record-  
16 keeping as the years go by, permits the cost analyst  
17 and gives him some sharper tools to work with, but I  
18 think this study just about reflects all the refinements,  
19 I believe, that I have made in the past. If the carriers  
20 have done something a little differently, it is because  
21 they did not have this data currently available.

22 Q. Thank you, Dr. Edwards. That is all  
23 that I have.  
24





1 THE CHAIRMAN: Mr. Mauro?

2  
3 MR. MAURO: Perhaps before starting Mr.  
4 Chairman, I would be permitted to put on the record  
5 my sincere congratulations to Commissioner Balch on  
6 his retirement. He will be pleased to know, while he  
7 has retired, that my absence was connected with a small  
8 bit of labour work, and I also want to say to Mr. Balch  
9 that, perhaps, unfortunately, he is commencing his  
10 retirement in the most "unretired" type of work, namely,  
11 the Royal Commission on Transportation.

12 I trust that counsel will not make too unfor-  
13 tunate his preliminary experience of retirement, and I  
14 want to extend to him my best wishes.

15 COMMISSIONER BALCH: Thank you, Mr. Mauro.

16 CROSS-EXAMINATION BY MR. MAURO (Cont'd):

17 Q. Dr. Edwards, will you please turn to  
18 page 2718 of volume 19, at the bottom of the page:

19 "Q. Yes, and have you any further comments  
20 on transportation costs as a whole?

21 "A. The large proportion of train expenses  
22 is clearly completely variable with traffic. For  
23 example, crew wages and fuel, both as regards  
24 over the road movements and switching, are 100  
25 per cent variable, as are the expenses for grain  
26 doors, which are included in miscellaneous train  
27 expenses. Trains handling grain throughout  
28 western Canada are operated on an 'as required'  
29 basis. . . ."  
30







1 Now, as you probably realize, Dr. Edwards,  
2 there are scheduled trains that handle grain, aren't  
3 there?  
4

5 A. Yes.

6 Q. And to the extent that grain is carried  
7 on a scheduled train there is a degree of fixed or  
8 constant cost, is there not?

9 A. No, sir; I dealt with that subject yester-  
10 day.

11 Q. I am sorry, I wasn't here.

12 A. Yes.

13 Q. I am referring to an article in "Railway  
14 Age," dated April 25th, 1960. It is entitled "Cost  
15 Map can aid Rate Men," and the article deals with the  
16 conception of fixed and variable costs. It is an  
17 article written by the Detroit, Toledo and Ironton  
18 accountant, M. H. Weisman, outlining his system and  
19 formula ...

20 THE CHAIRMAN: We had that yesterday.

21 THE WITNESS: This was dealt with.

22 MR. MAURO: Q. And what was your comment on  
23 this particular statement of Mr. Weisman on the matter  
24 of incremental cost: "The fact that engine hours and  
25 train miles are not completely variable, because some  
26 trains have to be operated regardless of traffic, and  
27 passenger service, where it is provided . . ."

28 A. My comment was that I was interested in  
29 that article and corresponded with Mr. Weisman.

30 It is a very narrow, short-term period filling





1 out cars -- trains -- that have variable experience  
2 on added car concepts, which is a very narrow incre-  
3 mental basis, and it is short-term in its application;  
4 and these costs are based on the long-term effect  
5 of the traffic.

6  
7 Q. In your opinion, Dr. Edwards, scheduled  
8 trains over a sufficiently long period of time would  
9 have completely variable costs whether the fact that  
10 the railroad has it scheduled and would be running that  
11 train -- whether one boxcar was being handled or none  
12 at all -- that doesn't result in any other cost?

13 A. Yes. I briefly explained yesterday that  
14 the train miles charged by this study to grain were  
15 actually all assembled, were removed from the total  
16 train miles in 1958 and left a residual number of  
17 trains -- that is, manifests or symbol trains -- and  
18 the services remaining, which varied from two a day  
19 on the average, or two or three a day -- in some  
20 districts even higher -- freight -- were presented  
21 to the traffic department and the operating department  
22 for appraisal to see if that was satisfactory to handle  
23 the non-grain traffic, and the operating and traffic  
24 departments of the C.P.R. and the people in the C.N.R.  
25 felt that our treatment of those trains as  
26 and the residual trains that would be left satisfied  
27 the test of 100 per cent variability.

28 Q. So that conceptually, from the costing  
29 factor, when you have a scheduled train run -- when  
30 you have a scheduled train run -- and you add on two







1 cars of grain to that scheduled run the cost of that  
2 operation is 100 per cent variable to the traffic?

3 A. We are dealing here with the variable  
4 cost of handling 40 per cent of the revenue ton miles  
5 in western Canada which is a tremendous volume of  
6 business -- some 300,000 cars. What is the question?  
7 What is the effect on train movement if that is no  
8 longer there? You simply can't think of adding one  
9 or two cars to a train that is already running.

10 Q. Well, are you suggesting that the  
11 Canadian Pacific Railway in their scheduled runs in  
12 the province of Manitoba don't add grain cars to  
13 scheduled runs?

14 A. No; they do handle grain cars on those  
15 trains.

16 Q. And to the extent that they handle those  
17 cars on scheduled runs doesn't that result in a fixed  
18 or constant factor?

19 A. No, not in the totality, because these  
20 other drag freights and extra freights that are running  
21 behind these scheduled trains, and intermixed with  
22 them, are also carrying not only grain but some of the  
23 slower traffic that might otherwise move on these  
24 scheduled trains.

25 Q. Will you turn to page 2722 of Volume  
26 19, to the first answer:

27 "Traffic and General, Communications -  
28 Rail, Joint Facility Rents and Property Taxes  
29 for Canadian Pacific were allocated to the  
30







1 study traffic on an overhead basis after excluding  
2 that portion of traffic and general expenses which  
3 are referable to passenger service and which would  
4 not be incurred if that service were not operated.  
5 The basis of such allocation was the ratio of  
6 such expenses to railway operating expenses, less  
7 the applicable passenger portion. The ratio  
8 was applied to the total variable operating  
9 expenses of the study traffic. This basis of  
10 allocation is the recognized procedure in  
11 developing an allowance for the proportion of  
12 expenses covered by this group of accounts  
13 chargeable to a particular segment of traffic.  
14 In my judgment it results in a proper distribu-  
15 tion of these expenses to the study traffic."

16  
17 Now, as I understand it, Dr. Edwards, the apportion-  
18 ment to passenger service was on an avoidable cost  
19 basis? I interpreted your wording . . .

20 A. Yes, that is so.

21 Q. "... which would not be incurred  
22 if that service was not operated . . ." as that?

23 A. Yes.

24 Q. And this appears as an acceptable method  
25 in costing services?

26 A. Yes.

27 Q. Now, you have stated on occasion that  
28 this is in fact the definition of out-of-pocket cost.  
29 I think it was in your 1954 speech -- that this cost  
30 could be avoided if the traffic was not carried?





1 A. Yes.

2 Q. What cost could the C.P.R. avoid if no  
3 grain was carried?

4 A. I would expect them to be able to avoid  
5 the expenses that we have apportioned to the grain study  
6 in this traffic.

7 Q. Both fixed and constant, on all of the  
8 various expenses which you have apportioned, the C.P.R.  
9 would save if they carried no grain at all?

10 A. They wouldn't avoid the constant expense.

11 Q. How about the variable expense for  
12 fuel and crew wages -- would they avoid all of these  
13 costs, Dr. Edwards?

14 A. The fuel and crew wages?

15 Q. The fuel and crew wages.

16 A. That is right.

17 Q. They would? That would mean that every  
18 train, every fuel and crew wage dollar represented in  
19 the variable cost of this study is occasioned by grain;  
20 but there are other scheduled train runs that they would  
21 remove these ---

22 A. Are we talking about traffic in general  
23 or are we talking about the train runs?

24 Q. I am sorry; I am talking -- I will try  
25 to explain it. I commenced my discussion on this  
26 point by pointing out that it is an acceptable method  
27 to use the avoidable cost approach in certain costing  
28 and that, in fact, on occasion, you have mentioned that  
29 out-of-pocket cost could be otherwise defined as a cost  
30







1  
2 which would not be occasioned if the traffic was not  
3 carried; and with a view to taking this approach to  
4 the costing of the study traffic I asked what would be  
5 the avoidable cost if the C.P.R. carried not one car-  
6 load of grain. And you replied they would eliminate  
7 all of those costs that have been submitted, par-  
8 ticularly the variable cost, and my suggestion to  
9 you . . .

10 A. You say "particularly the variable cost."  
11 They would eliminate the variable cost.

12 Q. But I am going to suggest . . .

13 A. Not "particularly"; they would eliminate  
14 the variable cost.

15 Q. Well, that is what your statement is.  
16 Now I am questioning that statement, with respect, be-  
17 cause I am suggesting to you that in the variable cost  
18 allocation where they have used this 100 per cent  
19 variable for the cost of fuel and crew wages-- I am  
20 suggesting that if there are wages payable and trains  
21 operating they would continue to operate and the men  
22 would continue to work whether there is one car of grain  
23 carried or three hundred thousand? There is a  
24 threshold cost of operating a railroad, and that the  
25 study traffic is not -- if it were approached on  
26 an avoidable cost basis -- that the variable cost in  
27 this study would have been reduced?

28 A. Well, I lost your thread, I am sorry.  
29 Is it your point that because we treated fuel as 100  
30 per cent variable then we go back to traffic in general





1 and treat those expenses 100 per cent variable.

2 Is that your point?

3 Q. No; I would like . . .

4 A. You are not talking about traffic in  
5 general?

6 Q. I am talking on the conceptual level of  
7 avoidable costs. They use avoidable costs on passenger  
8 service?

9 A. Yes.

10 Q. And you say that is acceptable, and I  
11 am trying to get a parallel to passenger service on  
12 a deficit traffic, and allegedly the grain traffic is  
13 a deficit traffic -- and should you use avoidable  
14 cost to determine passenger deficit, or the cost  
15 allocatable to passenger service on the basis that you  
16 consider they would be avoided if no passengers were  
17 carried; and if you use the same basis on the grain  
18 what costs would the C.P.R. have avoided if they didn't  
19 carry one carload of grain in 1958; and we got to the  
20 point where I suggested to you that there were threshold  
21 costs in operating railroads that are inherent in that  
22 operation; and that fuel and crew wages, for one, would  
23 not be 100 per cent variable, that the scheduled trains  
24 would continue to operate and that they would have to  
25 pay under their labour agreement a minimum 100 miles  
26 or 8-hours' wage to the crew?

27 A. The scheduled trains would continue to  
28 operate in a very large degree. The extent to which  
29 they would be reduced would be something that could be  
30





1  
2 furnished to you.

3 But, as I said, we took the train miles that  
4 we charged to grain in this study based on the methods  
5 that have been explained, and those are the trains that  
6 we have lifted out.  
7  
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11

12 (Page 13033 follows)  
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1 In terms of, I think, the C.P.R. that works out to  
2 maybe 93 or 94 per cent variability with revenue ton-  
3 miles; and in the case of the C.N.R. this traffic  
4 was costed out in terms of their heavy drag freights.  
5 So, in terms of the ton-mile portion of the traffic  
6 each railroad has actually taken off less than 100 per  
7 cent, but they have picked up the trains which it takes  
8 to handle the grain and taken 100 per cent of the cost  
9 of those. As a test, I asked them to compute the  
10 remaining trains and submit it to their people, which  
11 is a result of the schedule trains, and see if there is  
12 a practicality to this -- if there are enough trains  
13 left to service the system, but it left a very high  
14 order of frequency of train service each way daily that  
15 would take care of their traffic. You say there must  
16 be something left -- well, that is what is left if you  
17 look at it that way.

18  
19 Q. I take it, going back to the Traffic  
20 and General, that the first matter which had to be done  
21 was to make this allocation to passenger service --  
22 the breakdown of the various expense items under  
23 Traffic and General and allocate a certain amount as  
24 being the proper cost of operating passenger services?

25 A. They were based on the Accounting  
26 Department breakdown and special studies.

27 Q. I understood - and perhaps you can  
28 discuss it with Mr. Stenason and Mr. Bandeen -- that a  
29 formula was devised in the case of the C.P.R. by the  
30 vice-president Traffic under which this allocation of





1 the passenger services was made?

2  
3 A. They were special studies, an analysis  
4 of the duties and functions of the people, and when you  
5 had provided the basic separations, and then when you  
6 reached the executive officers their time was prorated  
7 over the remaining separations.

8 Q. There were special studies performed,  
9 were there, and there was a detailed allocation of cost  
10 to each of the sections under Traffic and General;  
11 is that what you are now telling us -- there were  
12 special studies performed and total costs ascertained,  
13 and then an allocation made?

14 A. This relates to Traffic, I understand.

15 Q. How about General?

16 A. And certain of the general expenses.  
17 As I understand the study, the way it was explained to  
18 me -- and I didn't go back and check their separations --  
19 but to me, that invokes general problems, and at the  
20 level we are speaking of in the expenses there is  
21 usually a pretty fair demarcation in the traffic  
22 expenses between work done for freight and work done  
23 for passenger.

24 Q. You feel that is a pretty clear demarca-  
25 tion in the Accounting Department between passenger  
26 and freight, and it should not be too difficult to  
27 apply those costs to the various divisions?

28 A. That would be true, particularly of the  
29 revenue accounting where there would be sharp breaks  
30 and the traffic would likewise be separable.







1  
2 Q. How about the expense accounts: do you  
3 think there would be this clear demarcation between the  
4 expenses associated with passenger and the expenses  
5 associated with freight?

6 A. Well, the expense accounts would, of  
7 course, be largely limited to executives. The great  
8 body of the clerical staff -- oh, you mean the account-  
9 ing of the expenses. You said "expense accounts".

10 Q. Well, if I am confusing you, Dr. Edwards,  
11 I want to apologize. You told me clearly from the  
12 revenue side of it it should be fairly clear to find out  
13 what revenues you received for passenger and what  
14 revenues you received for freight. Now, what about  
15 the expense side of it? Was there this similarly  
16 clear demarcation?

17 A. You mean the expense accounting?

18 Q. Yes. From the expense side of the cost,  
19 the expense of operating the freight service and the  
20 expense of operating the passenger service, is there a  
21 similarly clear demarcation?

22 --- (A short recess.)  
23

24 Q. Dr. Edwards, in order that the matter  
25 be cleared -- in order that my question be cleared --  
26 as I understand it, the traffic expenses were allocated  
27 on the basis of the formula developed by the vice-president  
28 of Traffic, and that the general expenses were what one  
29 might call prorated between passenger and freight?

30 A. You are speaking of the C.P.R.?





1 Q. Yes, the C.P.R.

2 A. Yes, the general expenses separation  
3 was based upon a study of the staff engaged in the  
4 revenue work and certain other expenses capable of  
5 direct separation such as statistical employees engaged  
6 in passenger statistical work, and the ratio thus  
7 arrived at was used to separate the remainder of the  
8 expenses, with the exception of pensions which was  
9 separated on the basis of the labour content of the  
10 passenger and freight expenses other than those  
11 included in these overheads.  
12

13 Q. Is this the method used in the United  
14 States for separation of costs between passenger and  
15 freight on this account?

16 A. Well, I don't have the freight and  
17 passenger separation rules with me. I knew them by  
18 heart at one time. But, the general rule is, you  
19 allocate directly all that is capable of allocation,  
20 and the remainder be apportioned.

21 Q. At page 2723 of Volume 19 there is this  
22 answer:

23 " The major difference between the two railways in  
24 these groups of expenses is the Pensions and  
25 Property Taxes. The portion of pension expense  
26 found to be variable with the study traffic on  
27 Canadian Pacific was approximately \$900,000 greater  
28 than on Canadian National. This difference  
29 reflects different pension plans, and different  
30 concepts as to what proportion of the total pension





1 expense in the year may be considered as variable  
2 and what may be considered as constant."

3 Again, Dr. Edwards, correct me if I am in  
4 error, but as I understand the C.P.R. method, they  
5 allocate a certain portion of the cost of pensions  
6 to passenger services -- at least, I assume they did;  
7 is that correct?

8 A. Yes, sir.

9 Q. I am talking of the C.P.R. now. And,  
10 I understand this was based on labour content?

11 A. Yes, sir.

12 Q. Then, did they use labour content as the  
13 basis for the allocation of pensions to freight services?

14 A. The pensions as separated to freight  
15 were distributed on the basis of to grain in the  
16 proportion that the grain expenses were to the total  
17 system expenses.

18 Q. Well, was the allocation of the pensions  
19 to freight based on labour content?

20 A. Well, the effect would be accordingly.  
21 If you take the grain and non-grain traffic, the general  
22 effect would be to apportion it on a labour content  
23 basis. If you want to carry it further than that,  
24 since the grain cars load heavier than the average, it  
25 would be something less than the revenue ton-mile  
26 apportionment.

27 Q. The C.N.R. -- it appears very clear in  
28 the C.N.R. exhibit touching upon this particular item --  
29 I am sorry I don't have my C.N.R. exhibit with me; perhaps  
30







1 Mr. Bandeen has it; it is sheet No. 5 of NR3-9 -- I  
2 think that is 57ZZ -- that they took 6 per cent of the  
3 labour expenses variable with the study traffic. They  
4 determined the labour expense of the study traffic at  
5 \$16,364,000 and took 6 per cent of that and arrived at  
6 a figure which was the portion of pensions chargeable  
7 to grain. What was the labour costs of the C.P.R.  
8 allocable to the study traffic -- what was the labour  
9 expense?  
10

11 A. I don't have the labour content. That  
12 is buried in the train expenses and shop expenses.

13 Q. Yes, I realize that. You can see my  
14 interest in this, but I am concerned with the methods  
15 utilized, because one method seems to be a direct  
16 allocation -- the same allocation that was made with  
17 passenger, where they took the labour content of  
18 passenger services and made a percentage charge against  
19 that for pensions, and that seems to be a clearly  
20 defined system. The C.N.R. in their pension item took  
21 the labour content of the study traffic, \$16,364,000,  
22 and charged at 6 per cent, and that seems to be a  
23 clearly defined system. If we could have, not necessarily  
24 at this moment, but if the information is available as  
25 to the labour content of the C.P.R.'s grain study  
26 traffic, we could then take a percentage of that and  
27 see how they match up as far as method goes?

28 A. That is a tremendous statistical test  
29 to go back through every account and break it down.  
30 There may be stationery, printing and what-not, and





1 maintenance of shops and yards. Labour trickles through  
2 everything.

3 Q. Yes.

4 A. I have never seen that done or heard of  
5 it ever being done. This method here is as close as ---

6 Q. Have you ever seen the C.N.R. method  
7 done before?

8 A. No, I haven't seen in cost studies  
9 pensions broken back to labour content of the cost  
10 study traffic under investigation.  
11  
12  
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15 -  
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30







1                   Q.    This was your first experience through  
2 Mr. Bandeen.    Mr. Bandeen introduced you for the first  
3 time to pensions being ascertained by per cent of the  
4 labour content of the study traffic -- \$16,364,000.

5                   A.    Yes.    I had overlooked this item. I have  
6 a note against it here.    I had forgotten about it.  
7 Yes, that is the first time I have seen the labour  
8 content of a cost study set out this way.

9                   THE CHAIRMAN:    He is the author.

10                  THE WITNESS:    Yes, a Bandeen refinement.

11                  MR. MAURO:    Q.    The Bandeen refinement is  
12 apparently acceptable, because you said in December, Mr.  
13 Edwards:

14                  "    This difference reflects different pension plans  
15 and different concepts as to what proportion of the  
16 total pension expense in the year may be considered  
17 as variable and what may be considered as constant."

18                  You have seen allocations of labour content  
19 for passenger services.    Apparently the C.P.R. drew  
20 out the labour content of passenger services to be  
21 able to allocate the proper pensions charged against it.

22                  A.    Yes.

23                  Q.    So we have one method which is completely  
24 new to us;    both methods are acceptable to you.

25                  A.    Yes, that is right.

26                  Q.    So this Commission would be justified in  
27 choosing the method which results in the lesser cost to  
28 the farmer, the grain shipper, as between the two  
29 methods.  
30





1 A. Well, the staff of the Commission will  
2 have to evaluate this. I would expect the C.P.R.  
3 result to be close to the C.N.R., and I also make the  
4 point that the pensions of the C.N.R. are currently  
5 running around 9 per cent, and for the variable expense  
6 they have used 6 per cent.  
7

8 Q. But either one of the methods are  
9 acceptable, and the Commission would be justified in  
10 using that method which results in lesser cost to the  
11 shipper.

12 A. Yes. The more refined basis gives a  
13 lesser cost -- I would say if the more refined basis --  
14 whatever that gives, use that cost, whether it is higher  
15 or lower.

16 Q. Now, page 2741 of Volume 19, your  
17 answer, Dr. Edwards, on this matter, going into this  
18 matter of solely relatedness:

19 " The variable expenses of handling any given study  
20 traffic includes all expenses incurred as a result  
21 of the movement of such traffic. Included in  
22 these variable expenses are not only fuel, wages,  
23 car repairs and similar items, but also the cost  
24 of maintenance and investment in fixed plant  
25 facilities, the existence of which was occasioned  
26 by the study traffic. To illustrate, the cost  
27 of fixed facilities for the platform handling of  
28 lcl freight have been treated as solely related  
29 to the handling of lcl freight. I am here  
30 referring to cost studies in the United States.







1 Coal and ore dock facilities have been treated as  
2 solely related to the coal and ore movement, that  
3 is, variable with the total movement of that  
4 particular traffic for which utilized. The  
5 principle of charging the cost of such fixed  
6 plant facilities as a variable cost of handling the  
7 study traffic requiring such facilities has been  
8 recognized by the Interstate Commerce Commission  
9 cost staff and provision has been made in standard  
10 costing forms for such treatment."

11  
12 Now, you have related there, you referred to  
13 various facilities that have been treated as being  
14 solely related in lcl cost procedures, namely, coal  
15 and ore dock facilities and the platforms for handling  
16 lcl freight. What similar facilities are solely related  
17 to the handling of grain in Canada?

18 A. The branch line trackage on a solely  
19 related facility.

20 Q. You are not going to classify a branch  
21 line on a fixed cost the same as an ore dock or the  
22 same as a platform for lcl freight handling.

23 A. I am, indeed. When these principles  
24 were enunciated by the cost section back in 1941, there  
25 are additional references beyond coal and ore docks  
26 stating that the same principle applies to branch  
27 lines.

28 Q. The I.C.C. has set forth that the same  
29 principle that applies to coal and ore docks and  
30 platforms for lcl freight-handling applies to branch







1 lines. Is that what you have just told me?

2 A. Yes. That was in an exhibit introduced  
3 by myself back in 1941, when we were laying out these  
4 principles. That is in documents, introduced in  
5 Docket 28,300.

6 Q. At page 2742, Dr. Edwards, there is  
7 the question:

8 "  
9 Now, what about branch lines?

10 A. Branch lines, the existence of which was  
11 occasioned by movement of any particular category  
12 of traffic have been costed as solely related to  
13 the traffic involved. This procedure was  
14 followed before the Interstate Commerce Commission  
15 in the Southern Governors' Grain Case; in Re  
16 Fresh Vegetables from Texas, California, Arizona  
17 and New Mexico; and in Re Trans-Continental  
18 Divisions."

19 Now, we will take them one at a time, Dr.  
20 Edwards. Who followed this procedure in the Southern  
21 Governors' case?

22 A. It was followed by the grain roads, and  
23 I was the witness for the grain roads.

24 Q. And what was the decision in that case?

25 A. We haven't had the decision yet.

26 Q. Who followed this procedure in the  
27 Fresh Vegetables case?

28 A. It was followed by the Trans-Continental  
29 roads, and I was the witness again.

30 Q. And what was the decision?





1           A.    The decision is still pending.    It was  
2 followed in the Trans-Continental case on behalf of  
3 Trans-Continental roads, and I was the witness in the  
4 case.

5           Q.    And what was the decision?

6           A.    We have not yet had a decision.    There  
7 was also the question raised by certain of the coal  
8 roads if the principle applies, and I have said it does.

9           Q.    What you really mean is that Dr. Ford  
10 K. Edwards had followed that principle in each of these  
11 cases, and the concept has been strongly opposed and  
12 to date no decision has been reached.

13           COMMISSIONER ANSCOMB:   How long ago were  
14 those cases held?

15           MR. MAURO:   Well, it is an interesting study.  
16 Some of them have been going on for some little time.  
17 I think the Northern Pacific and Great Northern have  
18 submitted final argument in the Trans-Continental case  
19 recently.

20           THE WITNESS:   Briefs are just being filed  
21 at this time.   It will be quite a spell before we have  
22 a decision.

23           MR. MAURO:   Q.   Then, Dr. Edwards, would  
24 you turn to page 2744, please?

25           MR. SINCLAIR:   Before the question was put  
26 by Commissioner Anscomb, I think counsel said to you  
27 that it was strongly opposed, this concept of solely  
28 relatedness was strongly opposed, and it received no  
29 decision.   I think you were going to make a comment  
30







1 there, Dr. Edwards. Were you going to make a comment?  
2 -- because just before that moment there was a question  
3 put by Commissioner Anscomb. Was there anything you  
4 wanted to put on the record in relation to the question  
5 by Mr. Mauro?  
6

7 THE WITNESS: I am trying to recollect.  
8 I am not sure of the position that the Southern grain  
9 people took on that.

10 MR. MAURO: Q. Gilbert Parr was the  
11 witness called in rebuttal, and Mr. Alldredge cross-  
12 examined you. I have, as a matter of fact, in my  
13 room the statement in rebuttal of Gilbert Parr, and  
14 it is not only to my knowledge, I know that the con-  
15 cept of the solely relatedness as applied by you in  
16 the Southern Governors' case was opposed, and there was  
17 pretty extensive cross-examination by Mr. Alldredge in  
18 West Palm Beach on that particular point, and, as I say,  
19 Gilbert Parr submitted a written rebuttal on this  
20 concept of solely relatedness. Some of those ideas I  
21 will be putting to you in a few moments, as a matter  
22 of fact, on this particular matter.

23 A. Well, Mr. Parr was, of course, second  
24 in charge of the Cost Section and assisted in their  
25 preparation of the case away back -- the 28,300 class  
26 rate case, wherein this principle was laid out, and  
27 the inclusion of the branch lines in this concept was  
28 spelled out as well as in the coal and ore wharves.  
29 So we had no internal questions or problems in the  
30 cost section on that matter at that time.





1 Q. To complete what my learned friend  
2 wanted to have tied up, my point was that you were the  
3 person who followed these procedures in the three cases  
4 mentioned in the transcript, that the concept has been  
5 opposed in the three cases, and that decisions are  
6 pending.

7 A. That is right. Most of my ideas some-  
8 times were opposed, I have to say. It took years to  
9 get them accepted. It took some period of time to  
10 make sure we were going to have our annual budget  
11 renewed.

12 Q. The Waybill analysis study.

13 A. I feel it is an accepted institution  
14 down at the Commission, I am sure.

15 Q. We are happy to bring in some innovations  
16 to this Commission that will become acceptable pro-  
17 cedures, Dr. Edwards.  
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1                   Page 2745, Dr. Edwards, please:

2                   "Now, will you go on and deal with the branch  
3 lines in the instant studies of the railways?

4                   "A. Branches which would not be economic  
5 but for the existence of the study traffic are  
6 solely related to the study traffic except where  
7 required for operational reasons."

8 I will read it again, Dr. Edwards. I want the  
9 Commission and yourself to keep this in mind:

10                   "Branches which would not be economic  
11 but for the existence of the study traffic are  
12 solely related to the study traffic except  
13 where required for operational reasons."

14 As I understand this statement, branch lines which  
15 would otherwise be uneconomic are presently economic  
16 because of the study traffic?

17                   A. No, they are presently economic because  
18 of the need for bridging between one line and another  
19 line. When the branch connects between two lines,  
20 that is an operational reason why -- you have to reach  
21 some territory beyond reached only by that branch line  
22 or some connection.

23                   Q. Yes, I am not referring to that part of  
24 the sentence, "except where required for operational  
25 reasons." The first part of the sentence reads:  
26 "Branches which would not be economic but for the  
27 existence of the study traffic are solely related to  
28 the study traffic."

29 My question is, branch lines which would  
30







1 otherwise be uneconomic are presently economic, according  
2 to this, because of the study traffic, because without  
3 the study traffic they would be uneconomic. Branches  
4 which would not be economic but for the existence of  
5 the study traffic are solely related to the study  
6 traffic. Branches which would not be economic but for  
7 the existence of the study traffic. Therefore branch  
8 lines which would otherwise be uneconomic are presently  
9 economic because of the study traffic?  
10

11 A. Yes, sir.

12 Q. And your policy, therefore, of the solely  
13 relatedness would penalize this economic traffic by  
14 fixing to it additional costs of operation for main-  
15 tenance and overhead on your solely related?

16 A. I am not trying to penalize anything or  
17 any traffic. I am just trying to look to the recovery  
18 of the fixed costs associated with that traffic and  
19 the handling of that traffic on that branch.

20 Q. So that we have established that because  
21 of the study traffic, otherwise uneconomic lines are  
22 presently economical, and under the solely related  
23 concept we would affix to them additional costs to  
24 make this economic situation more economical?

25 MR. SINCLAIR: Of course, with respect, Mr.  
26 Chairman, the word "economical" is not used by the  
27 witness. The word is "economic", not "economical", and  
28 they are different concepts.

29 THE CHAIRMAN: I am sorry, Mr. Sinclair, but  
30 you cannot compete with the jet.





1 MR. SINCLAIR: I would like to be able to  
2 compete with the owner of that jet. That is the  
3 TCA.  
4

5 COMMISSIONER MANN: You mean more than once  
6 a day across?  
7

8 COMMISSIONER BALCH: It seemed that yesterday  
9 it happened the same way, when you got up.  
10

11 MR. SINCLAIR: They have been bothering me  
12 for years. My submission, sir, is that the evidence  
13 is not "economical". The witness was not talking  
14 about "economical" in that sense. He said "economic."  
15 That was my point.  
16

17 THE CHAIRMAN: Well, the term that is more  
18 used is "economic".  
19

20 MR. MAURO: Economic, I use the same word.  
21

22 Q. Dr. Edwards, under this concept of  
23 yours, a shipper on a branch line would be wise to  
24 keep his traffic at a level which would make the line  
25 uneconomic because as soon as his traffic leads to  
26 an economic line he will be required not only to pay  
27 the costs of moving his traffic but the deficiencies  
28 of any other traffic moving on the line?  
29

30 A. I do not follow that analogy.

Q. We will go back over it.

A. If we are dealing with a coal wharf,  
if the coal is there, on occasion some barges or some  
other type of vessel may come in, make use of it,  
but the burden of supporting that facility is directly re-  
lated to coal except to the extent that other traffic







1 provides some relief of that burden, but we have to  
2 look to the body of traffic that brought this into  
3 existence for the revenues to meet the constant costs  
4 present in the operation of it. Otherwise it avoids  
5 its responsibility for the fixed costs that it generated.  
6

7 Q. I am trying to assist in some small way,  
8 Dr. Edwards, the development of this concept, because I  
9 think it is the concept that is important, which is the  
10 concept of solely relatedness, and you have told us  
11 in testimony that branches which would not be economic  
12 but for the existence of the study traffic are solely  
13 related to the study traffic. Therefore I have asked,  
14 that a shipper on a branch line would be wise to keep  
15 his traffic at a level which would make the line  
16 uneconomic, because as soon as his traffic leads to  
17 an economic line he may be required to pay not only the  
18 cost of moving his traffic but the deficiencies of any  
19 other traffic moving on the line; that if a line were  
20 able to handle lumber in northern Ontario -- that was  
21 the initial reason for it -- and then a sawmill or some  
22 other type of processing established itself or a  
23 mine, and the first purpose for which the line was built  
24 ceases to exist, the second fellow may find himself  
25 not only paying the cost of moving his own traffic but  
26 any deficiency caused by any other traffic utilizing  
27 that line?

28 A. Well, the other traffic does not create  
29 a deficiency. It is generating under its rate  
30 structure, which may be high or low, whatever it can





1 yield through that, but that residual burden, if the  
2 line is to be maintained, must fall upon the economic  
3 traffic, if the line is not to be torn up.

4 Q. So that where the railways have lost  
5 traffic to other media of transportation, the remaining  
6 captive traffic must pay?

7 A. If that line is to be supported by the  
8 traffic that uses the facility, requires the facility.

9 COMMISSIONER BALCH: May I put it this way.  
10 I do not know whether I am getting the point or not  
11 because, as I said, I am not an economist, but I might  
12 ask you: if there were no study traffic on the branch  
13 line there would be the possibility that it could be  
14 discontinued, except where it required cooperation  
15 with regions?

16 A. Yes, then every branch line we are  
17 talking about would be a branch line that should be  
18 abandoned forthright.

19 MR. MAURO: Q. Wouldn't you be discontinu-  
20 ing an economic line then, because you say that these  
21 lines would be uneconomic except for the study traffic?  
22 You have told us that it is the study traffic which  
23 makes these lines economic, and you would not discon-  
24 tinue an economic line, would you?

25 A. I would not discontinue an economic line,  
26 no, but I would expect, in costing the traffic of that  
27 line that is responsible for the existence of the line,  
28 to recognize the burden of the constant costs present  
29 in that line.  
30







1 Q.. Turn to page 2747, please, Dr. Edwards.

2 "Constant costs represent the difference  
3 between the total costs and the total variable  
4 costs of freight and passenger. The passenger  
5 train service revenues do not cover the total  
6 variable cost for the passenger train service.  
7 The resulting passenger train deficits were not  
8 included in the constant costs, there being  
9 considered a management problem."

10 I wonder whether you could tell the Commission what is  
11 the distinction between a management problem created by  
12 passenger deficits and the management problem created  
13 by branch line deficits?

14 A. The railroads feel that, given time, they  
15 will work their way out of the passenger problem by  
16 abandonment of the service or rapid curtailment that  
17 they are constantly trying to do; but the difference  
18 here would be, they see no way of existing rates working  
19 their way out of this problem of the deficit on the  
20 grain traffic.

21 Q. Well, I was not referring to the deficit  
22 on the grain traffic, Dr. Edwards. I was referring to  
23 the management problem created by passenger deficits and  
24 the management problem created by branch line deficits,  
25 forgetting about study traffic -- branch lines as a  
26 deficit problem?

27 A. Well, I suppose the primary difference  
28 in a primary way, I guess, of getting rid of the passenger  
29 problem, is you hope to get rid of it, and you just cannot  
30







1 conceive of getting rid of the grain in western Canada  
2 as a solution to this branch line problem.

3 Q. Well, branch line problems, there are  
4 applications going on all the time for abandonment of  
5 branch lines. This is a management decision. Manage-  
6 ment decides whether they are going to apply to have  
7 a branch line abandoned. It is management decides  
8 whether they are going to discontinue passenger ser-  
9 vice?

10 A. I do not think it is within the province  
11 of the management of these railroads to suggest tomorrow  
12 that "we will eliminate this traffic problem by elimina-  
13 ting all these solely related branch lines in western  
14 Canada"; but when you probably put part of their  
15 thinking on the passengers, plus substantial rate  
16 increases, maybe, in some form.

17 Q. Did you expect to see a sudden reduc-  
18 tion in passenger services, that there is going to be  
19 something cataclysmic in the change from the present  
20 passenger losses on the Canadian railways to a new  
21 era within the next year or so?

22 A. No, not within a year or so.

23 Q. The same with the branch line problem  
24 here. The branch line problem will have to be evolved  
25 over a period of years, just as the passenger problem  
26 will have to be management's decisions for future  
27 policy in attempting to evolve?

28 A. Well, if I was losing \$17 million a year  
29 out of pocket or something twice that for the two roads,  
30





1 I do not think it is something you want to keep on  
2 with certainly.

3 THE CHAIRMAN: Well, on that point, doctor,  
4 passengers were recognized as a deficit area too?

5 A. They are recognized as a deficit area  
6 in a narrower frame.

7 THE CHAIRMAN: You are making a study as to  
8 the dollar market, that would be, of grain?

9 THE WITNESS: Yes, sir.

10 THE CHAIRMAN: Was there any figure put on  
11 the deficit in the passenger by the roads in 1958?

12 A. There is no deficit in the grain study  
13 on passenger.

14 THE CHAIRMAN: No, no.

15 THE WITNESS: Both roads have studies under  
16 way. They are not complete and they will subsequently  
17 introduce them, Mr. Commissioner, I am informed.

18 THE CHAIRMAN: There is no estimate as  
19 to the related deficits, grain and passenger?

20 THE WITNESS: No, I have never seen a figure  
21 of that.

22 MR. MAURO: Mr. Chairman, on that point,  
23 just for the information of the Commission, I am reading  
24 from the Canadian Pacific Railway Company, Dominion  
25 Bureau of Statistics, and 1958 passenger revenue was  
26 \$35,677,000; and in exhibit 69 revised the variable  
27 cost of passenger service, \$86,303,000. So that there  
28 is \$51 million out-of-pocket cost.

29 MR. SINCLAIR: Of course ---  
30







1 MR. MAURO: These are his exhibits and the  
2 testimony of witnesses in this case.

3 MR. SINCLAIR: I think this should be read  
4 properly, because he is only taking passenger from  
5 revenue, that is, passenger carried revenue. He has  
6 got mail and express and all that to add in too.

7 MR. MAURO: I will also be interested in that,  
8 in the amount that moves by truck in express and mail.

9 MR. SINCLAIR: He is not comparing the two  
10 figures like with like.

11 MR. MAURO: Within range we are, talking of  
12 \$50 million losses out of pocket.

13 MR. SINCLAIR: Of course I dispute that.

14 THE CHAIRMAN: Well, we will have to work on  
15 that.

16 MR. MAURO: Q.. Dr. Edwards, in some of  
17 the cases in which I was reading your testimony in  
18 your exhibits, I came upon this phrase "maximum  
19 reasonableness case" and an instant one was the  
20 Southern Governors' Case. As I understand the term  
21 "maximum reasonableness case", it is usually a situation  
22 where someone is applying to have a rate reduced, and  
23 the carriers, who become respondents, attempt to prove  
24 that the existing rates are in fact just and reasonable,  
25 that they are not beyond the maximum level. Is that  
26 a fairly amateurish definition of maximum reasonable-  
27 ness case?

28 A. I am not in a position to comment upon  
29 maximum reasonableness. In the Southern Governors'  
30





1 case the question that I was working with was: are  
2 these grain rates, grain and the product rates ---

3 Q. Too high?

4 A. Are they reasonable in relation to the  
5 out-of-pocket costs of the service, the fully distributed  
6 costs of the service, and a host of market conditions?  
7 We spent more time on market surveys, almost as much  
8 as we did on the cost study, but at no place did I have  
9 anything to do with the question of the relationship of  
10 these grain commodity rates to some maximum reasonable  
11 rates. I do not recall I ever testified on that.

12 Q. Maybe I can refresh your memory.

13 A. Yes.

14 Q. Docket 31503 -- cross-examination.

15 A. That is not the same case. Docket 31503  
16 dealt with the divisions, not rate levels.

17 Q. All right, we will go to the Divisions  
18 Case. Would you tell us what maximum reasonableness  
19 is in the conceptual claim? Is it not a case where  
20 someone is attempting to have a rate reduced because  
21 they feel it is above the maximum reasonable rate?  
22

23 A. To my knowledge, maximum reasonableness  
24 never entered into the Divisions Case. It was a problem  
25 of taking some well over a billion dollars' worth of  
26 total revenue on traffic, with some move to Class rates  
27 and some move to Commodity rates, all kinds of rates,  
28 coast to coast; and the issue was a matter of splitting  
29 that money between three railroad groups with regard  
30 to their costs and their relative revenue requirements.





1 Q. Quoting from Volume 40, page 9508,  
2 you are being cross-examined by Freeman:

3 "Q. I am addressing myself to your new  
4 exhibit.

5 "A. Yes, sir.

6 "Q. 688. Do I correctly understand the  
7 term right at the top of page six, and again at  
8 the bottom of page six, that it is your view  
9 that in a maximum reasonableness case, or in a  
10 divisions case, branch lines which meet your  
11 tests of a solely related branch line should  
12 be charged with fully distributed costs -- I  
13 beg your pardon -- should be charged with fully  
14 distributed costs, and in a minimum reasonableness  
15 case should be charged only with out-of-pocket  
16 costs?  
17

18 "A. Would you read the question?

19 (Question read).

20 "The Witness: Well, that will have to be  
21 answered -- well, I can take them up one at a  
22 time.

23 "Q. (By Mr. Freeman) Let me ask it,  
24 maybe we can simplify it.

25 "A. You have three sets of conditions here.

26 "Q. The lumber case was a minimum reason-  
27 ableness case, was it not?

28 "A. Yes.

29 "Q. And you are defending the use of out-  
30 of-pocket costs in such a case, are you not?







1 "A. Yes, the lumber case, with the  
2 proposed rates having a 44 per cent margin over  
3 the out-of-pocket costs.  
4

5 "Q. And without resort to the solely  
6 related concept, or the use of fully distributed  
7 costs on a branch line?

8 "A. That is right.

9 "Q. Now, the Grain Case, where you have  
10 used solely related concept, was a maximum  
11 reasonableness case, was it not?

12 "A. Yes, I guess it is in that category.  
13 We showed the costs out-of-pocket, and then we  
14 showed what the effect of these burdens on the  
15 grain were.

16 "Q. And when you showed out-of-pocket costs,  
17 you used solely related costs for branch lines  
18 that meet your tests of solely related lines,  
19 did you not?"

20 A. Yes, sir.  
21  
22  
23  
24  
25  
26  
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1 Q. Now, you told us a few minutes ago you  
2 hadn't used the grain case as it wasn't a maximum  
3 reasonableness case. I suggest to you, Dr. Edwards,  
4 that, as I understand your testimony to these cases,  
5 you used the solely related concept in cases where  
6 rates were being attacked or investigated as being too  
7 high, and you are trying to show -- and I think  
8 properly, because where a person is attacking a rate  
9 as too high the carriers have the right to look to  
10 fully distributed cost under any differential in price  
11 because, in the first place, certain rates are reduced  
12 more than other rates -- and that, in minimum reasonable  
13 cases where the railways are trying to introduce a low  
14 rate, or where, for some reason there is an investiga-  
15 tion into out-of-pocket costs without any solely-  
16 related concept, that becomes the governing factor to  
17 find the rate below which a rate should not fall.

18 Am I correct, Doctor, in that?

19 A. No, you are not correct. That, to my  
20 knowledge, is the only reference to maximum rate --  
21 the grain case which, you may recall, was at the  
22 request of the Southern Governors, to reduce the rates  
23 very drastically -- some 25 per cent -- which would  
24 move them from fully distributed cost to close to  
25 out-of-pocket; and it brought in the grain roads as  
26 a whole, and, that being the principal commodity, that  
27 was a very serious situation.

28 Now, as to Mr. Freeman's questioning, that  
29 being a maximum reasonable situation he may have caught  
30







1 me in a weak moment. I view maximum reasonable rates  
2 as being the ceiling, and you have floors and a  
3 sort of class rate concept -- the ceiling applied to  
4 volume moving traffic that moves under commodity rates.

5 Now, the lumber case brought in there --  
6 I didn't make that lumber study. I am not clear ...

7 Q. Wascoe made it.

8 A. Wascoe?

9 Q. Yes.

10 A. Yes; and he was under severe competition and  
11 he was making some rate relationship on a rather  
12 limited scale for use in another proceeding. I had  
13 nothing to do with the use of this study except that it  
14 was drawn into the Trans-Continental Divisions case with  
15 some reference and I was asked to pass upon it and  
16 discuss it.

17 Now, that is the answer; I do not pick and  
18 choose on this principle.

19 Q. Now, I would also refer you to your  
20 exhibit in Docket 31711, which was the Fresh Vegetables  
21 from Texas, California, Arizona and New Mexico; and at  
22 page 17 of that exhibit I quote:

23 "  
24 The gathering service costs for fresh vegetable  
25 traffic originating on branch lines was treated as  
26 solely related to the branch line traffic and  
27 distributed over all the traffic on the gathering  
28 branch. This conforms to the Commission's  
29 practice in abandonment cases where the economic  
30 justification of the continued operation of a





1 branch line is tested by comparing the revenue  
2 from the involved traffic with the sum of the  
3 total (100 per cent) cost on the branch line and  
4 the out-of-pocket cost of moving the traffic from  
5 the branch on main line."

6 That is still this method used in the study  
7 before this Commission?

8 Maybe I could read that again; it is  
9 slightly involved.

10 A. Yes.

11 Q. "The gathering service cost for fresh  
12 vegetable traffic originating on branch line was  
13 treated as solely related to the branch line traffic  
14 and distributed over all the traffic on the gathering  
15 branch. This conforms to the Commission's practice..."

16 -- I assume the I.C.C. practice --

17 "... in abandonment cases where the economic  
18 justification for the continued operation of a  
19 branch line is tested by comparing the revenues  
20 from the involved traffic ..."

21 -- from the fresh vegetables --

22 "... with the sum of the total (100 per cent) cost  
23 on the branch line and the out-of-pocket cost of  
24 moving the traffic from the branch onto the main  
25 line."

26 Is that the method used here? And I see you  
27 have a footnote.

28 A. Yes; that was the method used in that  
29 case.  
30







1 Q. Now, why didn't the C.P.R. apportion  
2 these solely related costs in proportion to the  
3 traffic originating or terminating on the line?  
4 Wouldn't that have been a fair distribution?  
5

6 A. Well, that was a rough-and-ready basis.  
7 It apportioned the total to this other traffic, assuming  
8 that, in fact, it had its rates before you and they  
9 would all be raised; and it took the traffic in issue  
10 as a minor part, or the smaller part, through all the  
11 branches. But that is not a true economic test.  
12 Where the other traffic apparently moves under a rate  
13 structure and there is no intent to adjust that rate  
14 structure, the problem is the reality of recovering the  
15 revenue requirement from the traffic, the existence of  
16 which occasioned the branch. We didn't have time  
17 to go out and to make the analysis study such as was  
18 done here and cost out all the traffic on the branch  
19 and put their car power against it. That is the  
20 economic way to do it. This was a short-cut procedure.

21 MR. SINCLAIR: Which was?

22 THE WITNESS: The Fruit and Vegetables case.

23 MR. MAURO: Q. Wouldn't it be far more  
24 equitable if, on these branch lines on which grain  
25 represents 70 per cent of the traffic, you were to  
26 allocate 50 per cent of the cost to grain and 30 per  
27 cent to traffic; and, if grain represented 80 per  
28 cent to allocate 80 per cent to grain and 20 per cent  
29 cost to the traffic? Why not make the distribution  
30 of solely related lines equal to the per cent of traffic







1 originating and terminating at the branch lines on  
2 the basis that the traffic is to the total traffic.

3 A. The economic basis is that the rates  
4 beyond whatever other traffic is moving is presumed to  
5 be at that level which will yield its maximum contribu-  
6 tion to the branch.

7 Q. I see.

8 A. Now, in arriving at this contribution  
9 between other traffic, the procedure was to take  
10 half of the revenues, if this was a car of machinery  
11 coming in from the head of the lakes, or coming in from  
12 Toronto to a branch in Saskatchewan -- we took half  
13 the revenue from this remaining traffic, assuming that  
14 the remaining one-half was consumed in the out-of-pocket  
15 cost of carriage -- a rough-and-ready procedure --  
16 and that half of the traffic was credited to the cost  
17 of the branch line.

18 Now, if we had followed the procedure we have  
19 here we would have assumed that there would be an  
20 adjustment in the rates of all the remaining traffic,  
21 and that was the principle in the grain case, and  
22 that was only applied where grain was the overwhelming  
23 proportion of the revenue-producing traffic on the  
24 branch.

25 Q. I also want to refer you to your  
26 Exhibit 710 in Docket 31874, which is the Southern  
27 Governors' case. Again I quote from page 63. You  
28 have mentioned that "... branch lines solely related to  
29 grain are essentially those lines the economic continuance  
30





1 of which could no longer be justified without the grain  
2 traffic." Then you go on to state:

3 "  
4 The general test employed was that grain and  
5 grain products constitute one-half or over of the  
6 total branch line volume, with remaining traffic  
7 producing insufficient revenue to support the  
8 branch. In the present study, 32 per cent of the  
9 carload volume on the branch line identified as  
10 solely related consisted of grain traffic."

11 What would have been the result if the C.P.R.  
12 had used carloads instead of revenue ton-miles in  
13 determining solely-relatedness on branch lines?

14 A. Well, they didn't use revenue ton-miles.

15 Q. They used gross? Perhaps you would ask  
16 Mr. Stenason, Dr. Edwards.

17 A. He may have shown statistics showing  
18 the proportion of total revenue ton-miles traffic con-  
19 stituting all grain; but that was not the test. The  
20 test was whether or not the grain -- the remaining  
21 traffic -- had the earning power. He attributed half  
22 of the total revenue, main line and branch line,  
23 in support of the branch. That was the economic test  
24 along with the operating tests.

25 Q. That is fine; but what I want to know is  
26 what were the carloads -- if you had used carloads?

27 We have the statement from the Canadian  
28 Pacific telling us the percentage grain net ton-miles  
29 and the total revenue ton-miles in each one of the  
30 solely related branch lines, so that obviously entered







1 into the determination of solely relatedness -- the  
2 per cent of grain net ton-miles and total revenue ton-  
3 miles on the branch line ...

4 THE CHAIRMAN: Is that an exhibit?

5 MR. MAURO: I don't know. Perhaps we  
6 should ...

7 THE CHAIRMAN: That was brought to you by ...?

8 MR. MAURO: To Mr. Banks, by the railway,  
9 listing each and all of the branch lines -- the revenue  
10 ton-miles in grain, the total revenue 50 per  
11 cent grain and the total revenue ton-miles, and that  
12 was the percentage, and Mr. Stenason could take a look  
13 at them ...

14 MR. SINCLAIR: I am instructed by Mr.  
15 Stenason that that is what Mr. Banks asked for.

16 MR. MAURO: Q. I am suggesting, Dr.  
17 Edwards, that as in the Southern Governors' case you  
18 state that you took the carload traffic on the branch  
19 line to ascertain whether or not it was one of the  
20 tests of the fully-relatedness, and in the Southern  
21 Governors' case you found on all solely related lines  
22 the carload traffic was 32 per cent -- the number of  
23 cars represented 32 per cent of the total cars loaded,  
24 and I am trying to apply a similar test to the Canadian  
25 Pacific. I am advised that the revenue ton-miles on  
26 grain represent 26 per cent of the total revenue ton-  
27 miles of Canadian Pacific. Do you agree? I think  
28 you have given it in your figures yourself -- 26 per cent.

29 A. Yes, I believe that is right.  
30





1                   Q.    Grain represents 19 per cent of the  
2 gross ton miles on the Canadian Pacific, but only  
3 13 per cent of the number of carloads on Canadian  
4 Pacific.    In other words, on the Canadian Pacific,  
5 grain is 26 per cent of the revenue of the net ton-  
6 miles, but only 13 per cent of carloads; and on  
7 the Canadian National, by a strange coincidence, grain  
8 represents 18 per cent of the revenue ton-miles but  
9 only 9 per cent of the carloads -- in other words,  
10 exactly half in each case.    On the C.P.R., it is 26  
11 per cent of the revenue net ton-miles and the carload  
12 figure is only 13 per cent; but with the C.N.R. if  
13 you take the revenue ton-miles figure, it is 18 and  
14 if you take the carload, it is 9.

15  
16                   I am suggesting that if you had utilized the  
17 same touchstone in the C.P.R. cost study that you  
18 utilized in the Southern Governors' case, using car-  
19 loads instead of revenue ton-miles, the per cent  
20 factor would have been reduced and some of these lines  
21 would not have been solely-related.

22                   A.    The answer to that is that we didn't  
23 have time to run an economic test.    The economic test  
24 is the true test.    We cut it off at 50 per cent for  
25 time limitation, because we were dealing with a wide  
26 area of grain movement in the United States and there  
27 were some roads in the Mid-West that were in the study  
28 and some that were not, and those roads didn't feel it  
29 feasible; so that was a statistical substitution for  
30 the economic test.





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THE CHAIRMAN: We will adjourn until  
two o'clock.

---A luncheon adjournment.







1 ---On resume at 2.00 p.m.

2  
3 THE CHAIRMAN: Order, please. Yes, Mr.  
4 Mauro?

5 MR. MAURO: Q. Dr. Edwards, at the luncheon  
6 adjournment we were discussing the possible approach on  
7 a carload basis for determining solely relatedness as  
8 you had set forth in the Southern Governors' case,  
9 and my learned friend Mr. Sinclair and Mr. Stenason  
10 have over the luncheon period kindly prepared a state-  
11 ment based on carloads, and while my learned friend is  
12 not accepting my premise, he has kindly drawn up a  
13 statement as a percentage of carload traffic.

14 We can do it two ways, Mr. Chairman: either  
15 by having it properly prepared in a typewritten form  
16 and submitting them as an exhibit, or I could read the  
17 percentages in, or I could simply refer to those per-  
18 centages which are below 70 per cent.

19 THE CHAIRMAN: Well, do it as you wish.

20 MR. MAURO: I thought perhaps it would be  
21 preferable if I referred to those below the 70 per cent  
22 level, and we have the documents.

23 THE CHAIRMAN: That should cover it.

24 MR. MAURO: Q. Now, under the carload basis,  
25 Dr. Edwards, those lines which fall below the 70 per  
26 cent level are the Arborg line at 31.7 per cent ---

27 A. To clarify, would you explain at carload  
28 per cent level, what it means?

29 Q. Yes. As I understand it, this is the  
30





1 per cent of traffic loaded by carloads of grain  
2 originating or destined on the line?

3 A. Yes.

4 Q. And in fairness to my learned friend,  
5 Mr. Stenason did explain that the whole of the  
6 line was not considered solely related but just that  
7 portion of it at Stonewall.

8 MR. SINCLAIR: The figure can't be broken  
9 down.

10 MR. MAURO: Q. And the figure can't be  
11 broken down. So under the carload method, the  
12 Arborg line grain represents 31.7 per cent, on the  
13 Alida line 57.5 per cent; Manitou, 64.5 per cent;  
14 Rapid City 68.3 per cent; McAuley, 69 per cent; Wiseton,  
15 34.4 per cent; Kisbey, 50.2 per cent; Fife Lake,  
16 69.3 per cent; Cassils, 34 per cent; Altawan, 62.5  
17 per cent. Those are the total items that are  
18 less than 70 per cent under that calculation.

19 Under the former method, on the revenue ton  
20 miles, the grain formed 82.4 per cent; under the new  
21 calculation it is 75.3 per cent. So I just put those  
22 on the record.

23 A. What is the new calculation?

24 Q. 75.3 per cent.

25 A. That is on the total carloads of grain?

26 Q. On all carloads.

27 A. But using the 70 per cent test?

28 Q. Yes.

29 A. Well, in the grain case we used the 50  
30







1 per cent test.

2 Q. I thought in the evidence you submitted  
3 in your Exhibit 72 per cent is what you said?

4 A. No. I don't understand it that way.  
5 I believe that the minimum was taken as 50 per cent,  
6 but it averaged out to some figure in the 70's for  
7 all the branches.

8 Q. Docket 31874, Exhibit 357, page 12:  
9 "Adjustment No. 7, as listed in Table 1,  
10 reflects the constant portion (20 per cent) of  
11 the expenses charged to the country origin  
12 branch line services which have been identi-  
13 fied as solely-related to grain. The branch  
14 lines included are those between country origin  
15 and first transit point which would be subject  
16 to abandonment if the grain movement ceased.  
17 The traffic on these solely-related lines as  
18 measured in carloads was 72 per cent grain."

19 A. That is the weight of the average of  
20 all of them, but I think you will find in there that  
21 the minimum -- any branch having over 50 per cent car-  
22 load grain was taken with the solely related, and it  
23 ranged from there up to the 80's.

24 MR. SINCLAIR: I think the document my  
25 friend has has that somewhere stated in it.

26 MR. MAURO: Q. I am referring to the same  
27 Docket 31874, Exhibit 710, under a heading on page  
28 11a, "Solely-Related Facilities and Operations":  
29

30 "Before presenting and evaluating  
the overall cost results (Tables 1 to 4 here-





1 inbelow), it is desirable to first briefly  
2 discuss the constant costs or burdens incident  
3 to the operation of grain branch lines. The  
4 costs involved are dealt with under adjustments  
5 Nos. 7 and 8.

6 "It appears essential that the revenues  
7 from grain traffic, in addition to covering  
8 fully the out-of-pocket costs in the tradi-  
9 tional sense, should also cover a share of the  
10 remaining constant costs present in the opera-  
11 tion of solely-related grain branches before  
12 any depletion of grain revenues is considered.  
13 A study of the out-of-pocket or avoidable costs  
14 for a commodity properly includes the constant  
15 expenses for plant, facilities and operations  
16 which are solely-related to that commodity;  
17 otherwise, the burden represented by the pre-  
18 sence of these constant costs cannot be  
19 recognized and allocated to the traffic which  
20 occasioned it. As a result, such burden may  
21 not be reflected in the rate structure of  
22 this traffic.  
23

24 "Adjustment No. 7, as listed in Table 1,  
25 reflects the constant portion (20 per cent) of  
26 the expenses charged to the country origin  
27 branch line services which have been identified  
28 as solely-related to grain. The branch lines  
29 included are those between country origin and  
30 first transit point which would be subject





1 to abandonment if the grain movement  
2 ceased. The traffic on these solely-  
3 related lines as measured in carloads was  
4 72 per cent grain.

5 "Non-solely-Related Branch Lines:

6 "The grain traffic should properly  
7 bear its economic shares of the full costs  
8 of operating all of the branch lines on which  
9 it moves, including those not solely-related  
10 to grain. Value of service conditions con-  
11 sidered, grain traffic should not shift the  
12 overhead cost burden on such branch lines  
13 entirely to other traffic moving thereon or  
14 to traffic generally."

15  
16 Now, as I understand this concept, Dr.  
17 Edwards -- do you recall giving that particular evi-  
18 dence? I think it pretty well states what you have  
19 been telling us here, that in your approach to these  
20 problems the constant costs, in addition to the out-of-  
21 pocket cost, such traffic on solely-related lines  
22 should bear the constant?

23 A. Yes.

24 Q. Now, as I understand this position,  
25 Dr. Edwards, you contend that branch lines exist to  
26 service traffic that originates and terminates on those  
27 lines?

28 A. That is right.

29 Q. And that the cost, both variable and  
30 fixed, of operating and maintaining these lines must be







1 borne by the traffic using the lines in question?

2 A. That is right.

3 Q. And that unless this is done a burden  
4 is placed on other traffic?

5 A. That would be right.

6 Q. Now, I thought we would try to apply  
7 this to the Canadian scene, and we will start in the  
8 maritime region. I assume that the rail lines in the  
9 maritime region are there for traffic that originates  
10 or is destined to the maritimes, and unless this traffic  
11 bears its fully distributed cost then a burden is  
12 placed on other traffic?

13 A. Yes. I don't know of any solely-  
14 related branches in the maritimes. If there are  
15 solely-related branches there, that would be the case.

16 Q. I am trying to go to the heart of the  
17 concept itself, that where there is a line and the  
18 purpose of the line is to service traffic that  
19 originates and terminates on that line, and that unless  
20 the traffic which originates and terminates on that  
21 line bears its fully distributed cost it places a  
22 burden on other traffic. That is actually the basic  
23 philosophy behind it, in its simplest terms. The  
24 thinking is if they have a line of rail that rail line  
25 is there to service the traffic that uses that line.

26 THE CHAIRMAN: That is all the traffic.

27 MR. MAURO: Q. And unless all the traffic  
28 that uses that line can meet its fully distributed  
29 cost, then a burden is placed on other traffic?  
30





1 A. That would be so.

2 Q. So taking the maritime region of Canada,  
3 we have extensive rail facilities in the maritime region,  
4 and the only purpose of those rail facilities in the  
5 maritime region is to service traffic that originates  
6 or is destined to the maritimes, and unless it pro-  
7 vides revenues which cover the fully distributed cost  
8 of maintaining and servicing that rail line, there is  
9 a burden put on other traffic?  
10

11 A. That would be true.

12 Q. And then the lines in the province of  
13 Quebec, moving westerly, were similarly constructed  
14 for traffic which originates and terminates in the  
15 province of Quebec, and unless the rates charged in  
16 the province of Quebec return full costs, a burden is  
17 placed on other traffic?

18 A. Yes, a burden is placed on other through  
19 traffic.

20 Q. And that can continue through Ontario,  
21 Manitoba, Saskatchewan, Alberta, British Columbia,  
22 that the lines in those provinces were constructed to  
23 service the traffic which originates and which is  
24 destined to that area, and unless rates in those pro-  
25 vinces meet fully distributed costs, a burden is placed  
26 on other traffic?

27 A. Are you talking about branch lines or  
28 through ---

29 Q. I am talking of all traffic.

30 A. On all lines?







1 Q. Yes, on all lines, because under the  
2 requirements formula, whatever is not picked up  
3 by one traffic, if cost increases and fully distributed  
4 costs are not covered in those areas, a burden is  
5 placed on other traffic to pick it up.

6 THE CHAIRMAN: On all branch lines?

7 MR. MAURO: Q. No, on all lines.

8 A. Well, I have never conceived that  
9 solely-relatedness being applied to the main lines.  
10 I have looked at the separable facilities. When  
11 you are talking about the main lines, it is like  
12 cutting a dog in three pieces -- the parts can't  
13 live, presumably. So it is the variable parts of  
14 the operation I have treated that way. But the  
15 entirety of the burden must be met in the sum total  
16 constant cost.

17 Q. There is a totality of burden. Take  
18 the Canadian Pacific Railway. There is a totality  
19 of burden, and this totality of burden is distributed  
20 over all of the traffic; is that correct?

21 A. That is correct.

22 Q. And a certain traffic over certain lines,  
23 without restricting it to branch lines, does not return  
24 its fully distributed cost, to the extent it fails  
25 a burden is placed on other traffic if the C.P.R. is  
26 to recover this totality of burden. Isn't that ---

27 A. Well, strictly speaking, no; for the  
28 reason that if any traffic fails to recover its  
29 fully distributed cost it is necessarily burdening  
30





1 other traffic -- that goes back to the question of  
2 value of service on that traffic, and if it is con-  
3 tributing, making its maximum contribution, its  
4 elasticity of demand for transportation considered,  
5 then it is not burdening other traffic if it is doing  
6 the best it can economically, considering all the  
7 rest of the considerations.  
8

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13 (Page 13078 follows)  
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1           Q.    We will come back to the Maritime  
2 region.  If under your philosophy the lines exist to  
3 service traffic that originates and terminates on those  
4 lines, and that the costs, both fixed and variable, must  
5 be recovered from the traffic that utilizes the lines,  
6 unless the burden is to be placed on other traffic,  
7 then just restricting yourself to the Maritime region,  
8 to the extent that the traffic originating and destined  
9 to the Maritime does not return fully distributed  
10 costs, then traffic in Quebec, Ontario and across the  
11 country must make up this difference, isn't that  
12 correct?  
13

14           A.   Well, I have never carried it that far,  
15 to say that the fact that they did not cover the solely  
16 related costs was burdening other traffic, if they  
17 maximized their contribution as a whole; I have never  
18 carried that into slicing up the railroad into pieces,  
19 sectional pieces.  I think it is one big frame.  
20 What do you want me to think?

21           Q.    I just want you to tell me whether or  
22 not lines in the Maritime region are solely related to  
23 traffic that originates or terminates in the Maritime  
24 region.

25           A.   Well, you have wheat moving to export,  
26 for some reason, through Halifax.  I do not think that  
27 is solely related to the ---

28           Q.    Is that not traffic which originates  
29 or is destined, as far as the Canadian railways are  
30 concerned -- I do not find any difficulty in my own







1 thinking on this, Dr. Edwards, but I would be pleased  
2 to have you clarify it. It seems to me that under your  
3 definition of this concept of solely relatedness,  
4 the lines in the Maritime regions were constructed,  
5 are maintained, to service traffic that originates  
6 and is destined to the Maritime.  
7

8 A. I have looked upon the lines, main  
9 lines in the Maritime region as inseparable with the  
10 trunk line system of the railroad. I had never  
11 viewed it otherwise. The same way with British  
12 Columbia.

13 If you followed that concept through and  
14 backed up in the Maritimes as far as Montreal and then  
15 took the Pacific Coast and backed up to somewhere in the  
16 neighbourhood of Calgary, you might, say, apply your  
17 concept. Then you could go back and chop up the  
18 whole mainline system.

19 I am not viewing these segments of the main  
20 trunk road as being separable from the Canadian  
21 National and Canadian Pacific systems as a whole, and  
22 yet still leave them a living organism. I mean, the  
23 organism would collapse.

24 That is my problem with looking at main  
25 line integral parts of a system as being solely related  
26 to traffic, as being solely related.

27 Q. Well, the whole basis of your applying  
28 to the branch line factor fully distributed costs, Dr.  
29 Edwards, is because you say the branch lines were  
30 constructed and maintained to service traffic which





1 originate or is destined on that; and that unless  
2 the traffic utilizing the service of the branch line  
3 returns fully distributed costs, it places a burden  
4 on other traffic. I say to you that you can apply  
5 that concept, if you want to be consistent, to every  
6 line in the Dominion of Canada, and every line in the  
7 Dominion of Canada which was built to service traffic  
8 in a particular area of this country should be main-  
9 tained by receiving fully distributed costs from the  
10 traffic on those lines, and that if it does not the  
11 burden is placed on other traffic.  
12

13 That is the only way the railroad can get  
14 their money. They have a totality of burden. If  
15 you follow consistently your philosophy on solely  
16 related costs, we should solely relate the costs in  
17 each region of Canada and say that if that region of  
18 Canada does not return the fully distributed cost  
19 of maintaining the lines in that region, the burden is  
20 placed on other traffic.

21 THE CHAIRMAN: Forgetting grain as such for  
22 the moment.

23 MR. MORROW: We are talking about, yes,  
24 transportation and the system.

25 THE WITNESS: Well, fundamentally, Mr.  
26 Mauro, I have looked upon all these branches as variable.  
27 I have looked upon them as broadly and conceptually  
28 as variable in the way the train crews or fuel might  
29 be variable, in that these lines might be dispensed with.  
30 The branch lines might come and go as fuel or train crews







1 might come and go.

2  
3 My experience with abandonment cases and  
4 great numbers of them and observation of them, I have  
5 seen thousands of miles of branch lines in the United  
6 States abandoned in the last seven or eight years.

7 So that they are an expendable part of the  
8 plan without collapsing the plan as a whole.

9 This point has been raised before: why  
10 don't you consider the main line of the Union Pacific  
11 from Cheyenne to Ogden as expendable? Well, there  
12 would be no Union Pacific if that were the result.  
13 At least, the whole operation would collapse as an  
14 entity.

15 So fundamentally one is a variable expense  
16 with the plant being maintained; the other, you  
17 collapse the whole plant when you carry it as far as  
18 you have. I think that is probably the fundamental  
19 distinction.

20 Q. So there is a distinction in your mind  
21 between the solely relatedness of a branch and the  
22 solely relatedness of main lines; so that if we  
23 follow this branch line concept of yours to its  
24 logical conclusion, would it not be more equitable to  
25 establish a branch line arbitrary rate in other  
26 words, instead of increasing the rates on an entire  
27 commodity, since this is just a commodity that is deficient  
28 on rather the particular branch line operation?

29 Take as an example, if there were a lumber  
30 operation on a branch line in British Columbia started





1 by Commissioner Anscomb, and I started one, thinking  
2 this all out, on the main line. Why should I be  
3 penalized with the deficient operation of Commissioner  
4 Anscomb's branch line, when I used my own thinking on  
5 it and positioned myself on the main line? Why  
6 should my lumber rate on the main line carry fully  
7 distributed costs when they are not necessary on the  
8 concept of solely relatedness? So why don't we set  
9 up a branch line arbitrary?  
10

11 A. I have never given any thought to  
12 branch line arbitraries. The problem is here to find  
13 the costs that can be associated with and variable  
14 with the instant traffic as the test of the proposed  
15 rate.

16 Q. So that when the rate-making body comes  
17 to set these rates, they must also consider, Dr.  
18 Edwards, the ability of the commodity to pay the rate  
19 in question, is that correct?

20 A. Yes, sir.

21 Q. And if the rate-making body comes to the  
22 conclusion that the commodity cannot pay full costs,  
23 rather something less, what should it do? Should it  
24 set a lesser rate considering the ability of the  
25 commodity to pay?

26 A. Well, I think I have spent a good part  
27 of the last day going over those questions again and  
28 again. We can take them up again as to ---

29 Q. I don't want to labour you with ques-  
30 tions you have already answered.







1  
2 A. -- that question of consideration of the  
3 value of service and rate-making elements as I have  
4 expounded for hours and hours on that feature, but  
5 these non-cost considerations are elements that play a  
6 very important part in the determination of a just and  
7 reasonable rate.

8 Q. Now, Dr. Edwards, I do not want to go  
9 over these points even twice but assuming that the  
10 Commission refuses to accept, or in considering the  
11 ability of grain to pay it decides that the full cost  
12 figure submitted by the Canadian Railways is out of  
13 the question and they give something less than full  
14 cost, then this additional burden will have to be  
15 borne by other traffic, is that correct? The burden  
16 that is not granted by way of the rate increase?  
17 If they do not give full cost but only 80 per cent of  
18 full cost, the other 20 per cent is going to be borne  
19 by other traffic; is that correct?

20 A. I would say that it would probably be  
21 borne not by other traffic, it would be borne by the  
22 railroads themselves. If they were earning their  
23 full cost of money and the other traffic was in such  
24 a position that they could take increases and high  
25 rates, and that were demonstrated, and that such  
26 adjustments upwards would be made, if you are con-  
27 templating that; but as it now stands I do not see  
28 clearly that other traffic is bearing it all. Maybe  
29 they are contributing.

30 To the extent to which the stockholders are







1 bearing it, by earnings lower than the cost of money,  
2 and to the extent to which traffic is bearing it,  
3 it would be something to be determined; but unless  
4 the earnings are at the cost of money, it is certainly  
5 being borne by those who had earnings that are sub-  
6 stantially less than that level.  
7

8 Q. Could I advance this question, Dr.  
9 Edwards, to support my contention that this solely  
10 related concept of yours has been tendered in maximum  
11 reasonableness cases. In those cases where an investi-  
12 gation is being made as to whether or not a rate is  
13 too high, the solely related concept has been  
14 advanced as being a legitimate approach to determining  
15 what the maximum level of rates is just and reasonable;  
16 but in minimum reasonableness cases you have presented  
17 out-of-pocket costs as the determining factor and full  
18 costs merely as a guide to the rate-maker.

19 A. No, I would not say that is true.

20 Q. We are on to the final point that I want  
21 to deal with, Dr. Edwards, and that is the method of  
22 rate making and just and reasonable rates. You have  
23 told us that the rate being asked for by the railway  
24 representing full cost is a just and reasonable rate in  
25 your opinion?

26 A. Yes.

27 Q. Would you feel that a rate 33 per cent  
28 above fully distributed cost would be just and reason-  
29 able for moving grain in Canada?

30 A. I would feel that a rate 33 per cent





1 above the rate proposed would not be a just and reasonable  
2 rate, based on the traffic and rate-making considerations  
3 as set forth by Mr. Roberts and Mr. Crump.  
4

5 Q. See if you would agree with me, Dr.

6 Edwards, as to the definition of a proportional rate. I am c  
7 ting from the Traffic Dictionary by G.T. Stufflebeam at page  
8 175: "Proportional rate is a rate applying as a pro-

9 "portion on a part of the road of a shipment

10 "between one station and another -- but moving

11 "between the two stations, either originating beyond

12 "the first or destined beyond the second. For

13 "example: a rate from Syracuse, New York, to

14 "St. Joseph, Missouri, is made up of the rate to

15 "the Mississippi River from the point of origin

16 "plus the rate (proportional) to St. Joseph.

17 "This proportional rate is less than if the shipment

18 "had originated at a Mississippi River point."

19 Do you agree that that is a proportional rate?

20 A. Yes, proportional rates are widely used in  
21 the States and are simply the factors of the true  
22 rates based upon, well, a division of the true rate.  
23 For some reason you have to break it because the  
24 shipment stops or usually because the shipment stops.

25 Q. And it is usually less than the combination  
26 of the locals. In other words, as Stufflebean  
27 says, from Syracuse to New Joseph is less than what is  
28 made up of the rates from Syracuse to the Mississippi  
29 plus the balance; it is less than the rate would be  
30 if the shipment had been originated at the Mississippi







1 River to St. Joseph, Missouri.

2 A. Yes, but I do not look upon that as  
3 any test of what a proportional rate is. Proportional  
4 rate, to my understanding, is, you pay the balance of  
5 the through rate, but most through rates between  
6 distant points are higher than the combination of  
7 locals.  
8

9 Q. What was that?

10 A. Most through rates -- what did I say?  
11 Are lower than the combination of locals.  
12  
13  
14  
15  
16  
17  
18  
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20  
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30





1 Q. I will read his definition of "Export  
2 Rates" at page 94:

3 " Tariff published rates or charges on shipments of  
4 traffic destined to a foreign country; in case of  
5 steam vessels, the rate from originating points  
6 in the United States to the port of exit."

7 That is an export rate, as I understand it, Dr.  
8 Edwards.

9 A. I am sure it is; but I missed a sen-  
10 tence -- a part -- in there.

11 Q. I will read it again:

12 " Tariff published rates or charges on shipments of  
13 traffic destined to a foreign country; in case of  
14 steam vessels, the rate from originating points  
15 in the United States to the port of exit."

16 A. Yes; applicable only on the export  
17 traffic -- special rates on the export traffic.

18 Q. And I am correct in stating that pro-  
19 portional rates and export rates are invariably lower  
20 than rates for local delivery? In other words, the  
21 rate from Winnipeg to Halifax for export is lower than  
22 the rate for delivery in Halifax.

23 A. That is only true of the export rates,  
24 but proportional rates referring to through rates --  
25 I am thinking mostly of my grain experience -- the  
26 through rates of Minneapolis to Jacksonville, Florida,  
27 with a right of milling in transit at one or more  
28 intermediate points -- the proportional rates are the  
29 division of the through grain rates into proportions to  
30





1 the outbound transit conditions. You see, you have got  
2 the higher cost and lighter load bearing on what the  
3 rate would be on the through movement.

4 Q. There is no question the proportional rate  
5 is always lower than a combination of the locals.

6 A. The proportional rate is a factor in  
7 the through rate available.

8 Q. That is the whole purpose of it, isn't  
9 it, that on the through rate they only pay a proportion.

10 A. Yes; but if you take the through rate at  
11 \$2 from Minneapolis to some point with a stop-off in  
12 transit and a break at Chicago and the total rate is  
13 \$2 and the outbound proportion is a dollar -- the  
14 inbound factor is a dollar -- the sum of those two add  
15 back to the through rate; but if you shipped into  
16 Chicago without the transit privileges on the straight  
17 local rate and then picked up grain that came in by  
18 truck and didn't have these privileges and it went out,  
19 then, I guess the two factors added together would be  
20 greater than the \$2.

21 Q. But my point is -- forgetting about the  
22 transit privileges -- that a rate based on a proportion  
23 of one of the local rates invariably is lower than the  
24 combination of the locals.

25 A. Yes, you are right.

26 Q. At page 12804 of Volume 72, Dr. Edwards:

27 " Q. Normal rate-making?

28 A. Rate-making and market factors would  
29 apply as they affect the making of the railroad  
30







1 " prices. Out-of-pocket costs on this traffic is  
2 somewhere in the neighbourhood of  $7\frac{1}{2}$  mills a ton-  
3 mile. The traffic is a very large proportion of  
4 the whole. I would believe that if I were the  
5 traffic manager of these railroads and had the  
6 evidence before me that I now have and followed the  
7 usual considerations of trying to make the maximum  
8 contribution to my burden, that I would contemplate  
9 a rate somewhere in the neighbourhood of one cent  
10 per ton-mile as is now done..."

11  
12 Dr. Edwards, the export rate from Fort  
13 William to Montreal is 55 cents per 100 lbs. for 990  
14 miles, or a return of 1.06 cents per ton-mile.

15 According to your statement, this is a reason-  
16 able rate; it is over the one cent per ton-mile figure.

17 A. That is rail?

18 Q. This is rail -- grain from Fort William  
19 to Montreal, for export, 990 miles,  $52\frac{1}{2}$  cents per 100  
20 lbs., resulting in 1.06 cents a ton-mile. You say you  
21 would contemplate a rate somewhere in the neighbourhood  
22 of the one cent per ton-mile as is now done; so  
23 that that rate, in your opinion, would come up to the  
24 standards which you would set?

25 A. Unless there is -- if you are considering  
26 the cost factors and they are the same and when we  
27 consider the value of service factors and we were to  
28 put the two together -- you are asking me that question.  
29 Well, I have the problem of leaping to conclusions --  
30 that that would be a just and reasonable rate -- without





1 looking at the market factors surrounding that movement.  
2 Is it a depressed rate or is it a competitive rate?  
3

4 Q. Well, the railways aren't asking for  
5 any increase in the rate from Fort William to Montreal,  
6 and the rate returns 1.06 cents per ton-mile, which is  
7 greater than the 1 cent that you suggest is a just and  
8 reasonable rate on the Crow's Nest movement -- the  
9 statutory rates; so that the present rate from  
10 Fort William to Montreal, returning 1.06 cents per  
11 ton-mile, would come up to your standard of 1 cent per  
12 ton-mile.

13 A. Well, it would be easy to say Yes, but  
14 you look at the factors surrounding the movement of  
15 the traffic. Now, it might be easier to say:  
16 "Well, I suppose they are all the same." I don't  
17 know whether they are or not. I don't know how the  
18 rate was made up. It is a hard question to stand  
19 here and answer that this is a just and reasonable rate  
20 on this movement without evaluating all the factors I  
21 have listed that enter into the rate.

22 Q. These are the statutory rates I am  
23 referring to.

24 A. So I understand.

25 Q. So that if the railway felt they were  
26 unjust, they are completely free and ready and willing  
27 and able to move those rates upward if they saw fit.

28 A. Well, your statement would stand for  
29 itself, I suppose.

30 Q. And you have studied the grain problem in







1 Canada. You know the statutory rates only go to  
2 Fort William and Vancouver.

3 A. Yes.

4 Q. And that east of Fort William this is a  
5 rate established by the railway and it returns 1.06  
6 cents per mile which comes up to your general standards  
7 that you have established, being a just and reasonable  
8 level of rate for the movement of grain.

9 A. The fact that it is on the books, I  
10 suppose, speaks for itself. That is what you are  
11 saying.

12 Q. The rate from Fort William to Halifax  
13 is determined by adding 1 cent to the Montreal rate, or  
14 a through rate of  $53\frac{1}{2}$  cents per 100 tons for 1,719 miles,  
15 or at .62 cents per ton-mile.

16 Would you agree that this also is a reasonable  
17 rate since it is on the books and the railways, if  
18 they so wished, could raise the rates.

19 A. I can't answer that question.

20 Q. The 1 cent rate for the additional  
21 729 miles is a rate arbitrary or proportional rate and  
22 produces .027 cents per ton mile, or three-quarters of  
23 a mill per ton mile; so that comes pretty close to  
24 the  $7\frac{1}{2}$  mills per ton-mile.

25 A. Well, I presume that that incremental  
26 movement beyond Montreal is through train movement --  
27 trunk line movement -- without gathering service  
28 obligations.

29 Q. You and I know it is very valid rate-  
30





1 making to set an arbitrary on a movement which con-  
2 templates furtherance. The 1 cent arbitrary over  
3 the Montreal is a valid rate-making principle, because  
4 one of the principles of rate-making on these proportional  
5 rates is that the proportional rate contemplates  
6 further transportation; it is not a final or total  
7 cost; and this rate arbitrary over Montreal to  
8 Halifax is a just and reasonable rate put into effect  
9 by the railways without any statutory obligation,  
10 because it could be ...

11  
12 MR. McDONALD: There are statutory obliga-  
13 tions; you get the question of favouring Canadian ports;  
14 there is the obligation on Canadian National Railways  
15 to favour the Atlantic ports; and also the parity of  
16 rates, comparing the parity with New York and Baltimore  
17 and so on.

18 MR. MAURO: This is now getting down to  
19 just and reasonable rates based on competition from  
20 American ports and necessity, and I am very pleased  
21 that my learned friend, Mr. McDonald, pointed out some  
22 of the matters of national policy that necessarily  
23 come into rate-making, and the necessity of getting  
24 goods to export positions.

25 Thank you very much, Mr. McDonald.

26 MR. McDONALD: I am very glad to help you.

27 MR. SINCLAIR: I might say, Mr. Chairman,  
28 that we do not maintain a parity, and the obligations  
29 that Mr. McDonald referred to are statutory obligations  
30 on the Canadian National, which we have not.







1 MR. MAURO: Q. Now, with reference to  
2 these proportional rates, just to make clear that they  
3 are not anything unheard of, I would refer you to page 38  
4 of this burden study, Dr. Edwards. I understand you  
5 had referred to anthracite coal, and in one case I  
6 notice a fairly large movement of anthracite coal to  
7 washers; that is where it goes to have the coal cleaned;  
8 and then it would be further transferred after that;  
9 and it returned 32 per cent of out-of-pocket -- 32 per  
10 cent of out-of-pocket -- and only 18 per cent of fully  
11 distributed cost. That is the movement of anthracite  
12 to washer.  
13

14 A. This movement of anthracite to washer is  
15 all contemplated in the total rate of anthracite. It is  
16 a short-haul move from the mine to the washery to lift  
17 out the rock and the unclean elements in it so that  
18 they won't be hauled through to destination; and  
19 that rate was made as a nominal charge; and in any  
20 consideration of the total rate on anthracite, it isn't  
21 too far below fully distributed.

22 Q. And that is true of this proportional  
23 rate which exists in the United States, which returns  
24 32 per cent of out-of-pocket and only 18 per cent of  
25 fully distributed as part of the total.

26 A. Well, I never heard that referred to as  
27 a proportional rate. Maybe it might be so defined,  
28 but whatever you call it, it is no test. You would have  
29 the through movement of the particular commodity, and  
30 it doesn't come to rest at the washery; it goes beyond;







1  
2 and you have to contemplate the total charge which is  
3 quite compensatory.

4 COMMISSIONER MANN: That would not have  
5 been given unless the movement carried on by rail?

6 THE WITNESS: Oh, yes.

7 COMMISSIONER MANN: That is contingent  
8 upon its carrying on by rail?

9 THE WITNESS: Yes. I don't know where  
10 that rate came into being; I don't know when; but it  
11 is relatively new in our rating studies, and the basis  
12 for it I don't know. But it is quite obviously just a  
13 nominal charge on the stop-off of the through movement  
14 to clean the coal.

15 MR. MAURO: Q. I now wish to refer you to  
16 some comments or statements relative to grain in the  
17 transcript of evidence of one, Arkle, who is an officer  
18 or employee of Canadian Pacific, Dr. Edwards, and  
19 this evidence was taken in Ottawa, Ontario, on May 25,  
20 1953, re the removal of hold-down of Crow's Nest Pass  
21 Rates on grain and grain products between prairie points  
22 and Fort William.

23 I am starting to read from page 8,012, where  
24 he was questioned by my learned friend, Mr. Sinclair:

25 "Q. Would you tell the Board, Mr. Arkle,  
26 "whether traffic conditions are similar in the  
27 "movement of grain for local consumption, grain  
28 "products for local consumption within Western  
29 "Canada and grain and grain products moved to  
30 "Fort William.





1 "A. There are substantial differences in  
2 "how grain is carried if it is destined locally  
3 "within Western Canada and if it is destined to  
4 "Fort William.

5 "Q. Can you give us an example?

6 "A. There are differences between local grain  
7 "and Fort William grain in the volume transported,  
8 "that is one.

9 "Q. Yes.

10 "A. And the contract of carriage is two.

11 "Q. And the minimum weight governing grain  
12 "products, and the further transportation charges  
13 "that are contemplated when the traffic moves.

14 "THE ASSISTANT CHIEF: Excuse me, Mr. Arkle,  
15 "please. What was No. 2, did you say?

16 "A. The contract of carriage.

17 "MR. SINCLAIR: Q. Well, it might be  
18 "wise, Mr. Arkle, and it would be of some assis-  
19 "tance to the Board, if you explain a little more  
20 "and tell the Board the differences, for instance,  
21 "on each of those categories that you speak of.  
22 "Take the volume first. Why do you say that the  
23 "volume to Fort William is a significant difference  
24 "compared to the volume of local mileage grain  
25 "and products?

26 "A. The movement to Fort William is virtually  
27 "in solid trains handling maximum tonnage with  
28 "minimum of switching or terminal work both in  
29 "transit and at Fort William.  
30







1 "Q. Yes?

2 "A. Grain and grain products moving locally  
3 "within Western Canada invariably entail the  
4 "frequent handling of single cars.

5 "Q. Yes. Now, does all grain moving to  
6 "Fort William channel in at a single point on the  
7 "Canadian Pacific, for instance?

8 "A. Yes, it comes into Winnipeg and then is  
9 "made up in solid trains, they are terminaied there  
10 "and move to Fort William in solid trainloads.

11 "Q. Going further back on the main line  
12 "are there other channels?

13 "A. Yes, you might get a solid train at  
14 "Moose Jaw come right through to Fort William without  
15 "any -- well, with a minimum of terminal work.

16 "Q. Yes, I see. Now, that was the first  
17 "reason you gave. I think the second point was  
18 "the contract of carriage, there was a difference  
19 "in the contract of carriage under which grain  
20 "moved to Fort William and on which grain moved  
21 "locally on the local mileage rates within Western  
22 "Canada. Would you expand that, please?

23 "A. The contract of carriage is different  
24 "on grain to Fort William, the railways under the  
25 "terms of the bulk grain bill of lading forego  
26 "demurrage in order to have the privilege of  
27 "diverting cars of grain to elevators at Fort  
28 "William which are able to unload such cars  
29 "promptly, when elevators to which the cars are  
30 "actually consigned cannot do so . . . "





1  
2 MR. SINCLAIR: Would you tell the witness  
3 whether they are able to take advantage of that?

4 MR. MAURO: Of the diversion?

5 MR. SINCLAIR: Yes.

6 MR. MAURO: I am saying they can divert  
7 cars.

8 MR. SINCLAIR: I think he should have told  
9 the witness whether the railways are able to make use  
10 of the diversion clause under the bill of lading.

11 MR. MAURO: You have your contract.

12 MR. SINCLAIR: I think this is important.

13 MR. MAURO: Q. "What is the contrast  
14 on those points with grain moving locally?

15 A. Grain moving locally within Western Canada  
16 or to points other than Fort William are sub-  
17 ject to demurrage.

18 "Q. And can you make diversions of  
19 those cars at the will of the railway?

20 A. No, you cannot divert as you can do  
21 at Fort William."

22 This is only 1953, mind you.

23 MR. SINCLAIR: You tell the witness whether  
24 he can do it in 1953.

25 MR. MAURO: You don't want to change con-  
26 tracts from year to year, do you? This contract is  
27 for all time.

28 MR. SINCLAIR: Inform the witness whether  
29 they were able to make use of the diversion provision  
30 of the contract in 1958.





1 MR. MAURO: Well, Mr. Arkle was the one  
2 giving the evidence.

3 THE CHAIRMAN: That was the situation then.

4 MR. MAURO: This is the statement of Harry  
5 Arkle, a member for forty years of the Canadian Pacific.

6 MR. SINCLAIR: Would learned counsel inform  
7 the witness as to whether the situation in 1958 was  
8 the same as in 1953?

9 MR. MAURO: What has that got to do with it?  
10 I am not writing an opinion. I am reading someone's  
11 testimony.

12 MR. SINCLAIR: I am very happy he has brought  
13 in this question of demurrage.

14 THE CHAIRMAN: You can bring in evidence  
15 later.

16 MR. SINCLAIR: Oh, no, it is already before  
17 the Commission at the request of the Commission and  
18 Commissioner Mann. We have undertaken to file the  
19 entire record in the demurrage case for the Commission.

20 MR. MAURO: I think it is most unfortunate  
21 -- these interruptions when I am quoting testimony  
22 from one of my friend's own witnesses.

23 "Q. What is the contrast on those points  
24 with grain moving locally? A. Grain  
25 moving locally within western Canada or to  
26 points other than Fort William are subject  
27 to demurrage.

28 "Q. And can you make diversions of those  
29 cars at the will of the railway? A. No,  
30 you cannot divert as you can do at Fort William.







1  
2 "Q. I think the third one you gave, Mr. Arkle,  
3 had to do with minimum weights and carloading,  
4 and would you expand on that a little, please?

5 A. The minimum weight on grain products  
6 handled under terminal rates to Fort William  
7 and Port Arthur is 50,000 pounds whereas the  
8 minimum on grain products under the mileages  
9 rates in western Canada is 40,000 minimum.

10 "Q. Fourth in the reasons you gave was  
11 transportation, additional transportation  
12 charges."

13 We get to the point of these proportional  
14 rates, Dr. Edwards.

15 "I think you said there was a difference in  
16 that respect? A. Well, the movement to  
17 Fort William contemplates the assessment of  
18 additional transportation charges on grain or  
19 its products beyond that point either (a) to  
20 all rail, lake and rail or all water. On  
21 the local grain and grain products between  
22 western points, that is points east of the  
23 lakehead, no additional charges are contem-  
24 plated.

25 "The Chief Commissioner: Q. Mr. Arkle,  
26 have you any figures that might show the total  
27 export from Canada in any given year of grain  
28 products and flour? I mean by that this: I  
29 suppose in Canada we have a  $3\frac{1}{2}$  million bushel  
30 wheat crop."





1 It shows you how much the Chief Commissioner  
2 knew about it at that time, Mr. Chairman.

3 Q. I simply read you that, Dr. Edwards, to  
4 tell you that in the movement of grain in Canada these  
5 statutory rates, Crow's Nest rates, are in fact pro-  
6 portional rates or export rates. They contemplate  
7 burdens, and I wondered whether you had this in mind  
8 when you decided that the one cent per ton was a  
9 just and reasonable rate for the carriage of grain  
10 under statutory provisions? Did you know about  
11 that?  
12

13 A. The determination of whether the one cent  
14 was a just and reasonable rate was based on the factors  
15 enumerated by Mr. Roberts as a traffic man's analysis  
16 and judgment, and Mr. Crump's analysis.

17 Q. Did Mr. Roberts or Mr. Crump tell you  
18 these rates were proportional and they contemplated  
19 further transportation costs?

20 A. I had no discussions with them on the  
21 subject.

22 Q. The, I refer you to page 12782 of  
23 Volume 72. You were asked the question by Commissioner  
24 Mann, and you answered:

25 "No, I am just not supporting the proposition  
26 that seems to me most abhorrent, that a  
27 carrier be expected in the year 1960 to sell  
28 its services at the rates of 1899. That  
29 to me is a most astounding situation and it  
30 is the relief of that that I look to in its







1 narrower framework."

2 And again, on page 12784:

3 "The Witness: Yes, sir. I would like  
4 to narrow it this way. I do not like to use  
5 strong language, but I feel in a sense out-  
6 raged that any private company in the economy  
7 should be asked to give out in a large,  
8 tremendous area of western Canada, some 45  
9 per cent of all its services at the rates of  
10 1899. I never heard of such a thing."

11 I just wanted to refer you to the prices on  
12 grain over a particular period, Dr. Edwards, and I  
13 wanted to perhaps ask you your opinion as to outrage  
14 and abhorrence on that. Prior to 1898 the price of  
15 wheat per bushel was 99 cents and the rate to Fort  
16 William from Regina was 23 cents. In 1899 the price  
17 of wheat was 70 cents a bushel, the rate 20 cents.  
18 In 1908 the price of wheat was \$1.05, the rate 18  
19 cents. In 1918 the price of wheat was \$2.21 a  
20 bushel, the rate 24 cents. In 1930 the price of  
21 wheat was 64 cents a bushel, the rate 20 cents.

22 THE CHAIRMAN: Per 100 pounds.

23 MR. MAURO: Yes, 100 pounds.

24 Q. In 1932, 64 cents a bushel; transpor-  
25 tation charges 20 cents per 100 pounds. In 1933  
26 the price of wheat was 54 cents a bushel, transpor-  
27 tation charges 20 cents per 100 pounds. And sub-  
28 sequently, except for the years 1936 and 1937, it  
29 was not until 1943 that the price of wheat reached the  
30





1 1899 level.

2 A. 1943?

3 Q. 1943. I wonder if your senses are  
4 similarly outraged at a rate which was maintained  
5 even though it represented in excess of 30 per cent  
6 of the sale price of the commodity?

7 A. Well, it looks as though I would have  
8 a little sense of outrage there too, doesn't it?  
9 What I am thinking of here, of course, the farmers have  
10 a very serious problem. The question here is that  
11 whatever subsidization or assistance the farmers are  
12 getting, competition in world markets and meeting the  
13 American wheat export situation, is through low rates  
14 set by the railroads. The question is, since that  
15 is a national problem, why that subsidization, in effect,  
16 or assistance, whatever you want to call it, to keep  
17 the grain moving easily, should be borne by the  
18 carriers alone. In the United States those burdens  
19 are spread over the entire economy through the  
20 federal government, and the rates seek their own  
21 normal level. When I speak of sense of outrage I  
22 am thinking of that burden being saddled upon, say a  
23 private carrier whereas elsewhere it is laid upon the  
24 entire economy. The problem is still there.

25 Q. Would you like the United States system  
26 -- would you approve of the United States method of  
27 alleviating this problem being introduced in Canada?

28 A. No, sir, I am not suggesting that.

29 Q. Well, in the United States there is no  
30





1 subsidy paid to a railroad to carry the commodity. If  
2 there is any lifting up or maintaining of the price it  
3 is to the farmer and the farmer pays the rail?  
4

5 A. Yes, the government try to see that  
6 the price to the farmer is maintained which permits  
7 him to go out and buy his transportation on a relatively  
8 free market, and that grain rates, which take -- the  
9 grain rates, the level of which fall into the American  
10 rate structure at a reasonable level, which do not have  
11 this heavy depressed influence that exists in Canada.

12 Q. Do you know what the price of wheat is  
13 in Canada -- what the farmer receives for his wheat?

14 A. We had figures on that yesterday. I  
15 would like somebody to tell me. I am not an expert  
16 on that.

17 Q. What is the price of wheat in the United  
18 States?

19 A. I haven't looked at that lately.

20 Q. Have you worked out what the freight  
21 charges on grain in the United States are as a percen-  
22 tage of the sale price of wheat in the United States?  
23 It might be an interesting calculation: what percentage  
24 of the received price that the farmer obtains for his  
25 wheat in the United States, and take what percentage  
26 the freight transportation charges are and compare  
27 that to the percentage by the Canadian farmer?

28 A. I don't think I did. I worked out the  
29 price of transporting a bushel or one hundredweight  
30 of wheat and how much that amounted to in a loaf of







1 bread so that the bakeries in the south -- but that is  
2 not what you are asking.

3 Q. I will tell you what our research  
4 discovered, and it is that the per cent gross freight  
5 revenue of value at destination in the United States  
6 of wheat is 8.20 per cent -- 8 per cent; that is a  
7 quotation from the ICC.

8 A. Oh, yes, that is right; I was thinking of  
9 the farm price.

10 Q. I think you may find if you work out the  
11 Canadian rate structure and the price received by the  
12 farmer at Fort William, that coincidentally it is about  
13 8.2 or 8.4 per cent?

14 A. Well, yes, but that does not take away  
15 the fundamental problem that this traffic is handled  
16 by both railroads at some \$35 or \$40 million out of-  
17 of-pocket loss, and it is a very heavy burden on them.

18 Q. Dr. Edwards, on page 12589, Volume 71,  
19 the bottom of the page:

20 "A. No, sir, I would not qualify that  
21 answer. You look in this book and read of  
22 the experience of grain that moves well above,  
23 far above, fully distributed costs, and all  
24 the products of agriculture as a whole move  
25 very close to the fully distributed costs,  
26 and the value is from eight to ten times per  
27 ton on grain than it is on coal and it is  
28 not subject to the competitive transportation  
29 conditions that coal is in its markets against  
30





1 gas and oil."

2  
3 Firstly, this business about all the  
4 products of agriculture as a whole moving very close  
5 to fully distributed costs: I refer to page 16 of the  
6 latest burden study. The table is, "Leading  
7 Commodities in Failure to Contribute to the Trans-  
8 portation Burden by Territorial Movements." And  
9 in the year 1957 on a per ton it shows the following:

10 Pulpwood	failed to the tune of 50¢ per ton
11 Gravel and sand	30¢
12 Lettuce	\$18.14
13 Potatoes, not sweet	\$ 4.18
14 Feed	67¢
15 Vegetables, fresh	\$17.02
16 Cattle, calves, SD	\$ 4.12
17 Sugar beets	98¢
18 Canteloupes, melons	\$27.52
19 Logs, butts, bolts	\$ 1.06

20  
21 So that there are a number of agricultural  
22 products that not only do not move at fully distributed  
23 costs, but move considerably under their out-of-pocket  
24 costs; is that correct?

25 A. That is right, and it is also right that  
26 I have been engaged in cases making a very serious  
27 endeavour to raise those rates to a significant level  
28 above out-of-pocket costs -- I didn't mean all com-  
29 modities, but many of them, and I know many of those  
30 you read are either under way or contemplated for rate







1 proceedings before the ICC.

2 Q. Dr. Edwards, we mentioned previously  
3 that you referred in your testimony to the decision  
4 of the Supreme Court of the United States in the  
5 Northern Pacific versus North Dakota, and that was  
6 a 1915 Decision, and you quoted it to this Commission  
7 with agreement, and I knew you would want this Com-  
8 mission to have any later decisions on this subject,  
9 and I know you are familiar with the Baltimore and  
10 Ohio versus the United States, which appears in 1953;  
11 345 United States Reports, on page 146, and I quote:  
12

13 "For not only are fair decisions as  
14 to vegetable rates vital to the welfare of the  
15 farmers and whole sections of the country;  
16 the health and well-being of the nation are  
17 involved. . . and so long as rates as a whole  
18 afford railroads just compensation for their  
19 overall services to the public the Due  
20 Process clause should not be construed as a  
21 bar to the fixing of non-compensatory rates  
22 for carrying some commodities when the  
23 public interest is thereby served."

24 I assume that you would want this Commission  
25 to give full consideration to this decision of the  
26 highest court in your country when they are considering  
27 what action should be taken on the movement of export  
28 grain in Canada?

29 A. Yes, that was the "carrots-without-tops"  
30 case. As part of the general rate structure, some of





1 this movement tailed down below -- a segment of it --  
2 below the out-of-pocket costs. Several Supreme  
3 Court justices dissented, and carrots are part of  
4 the revisions in this vegetable case that you men-  
5 tioned. But, in any event, they made that statement.

6 Q. That is the decision of the majority  
7 of the Supreme Court, in the public interest, and must  
8 be taken into account?  
9

10 A. Yes, that was the majority.

11 Q. I want to thank you, Dr. Edwards, for  
12 exposing yourself to this very long ordeal.

13 A. Thank you, sir.

14 ---Short recess.  
15  
16 -  
17  
18  
19 -  
20  
21  
22 -  
23  
24  
25 -  
26  
27  
28  
29  
30





1 THE CHAIRMAN: Order, please? Mr. Sinclair?

2 MR. SINCLAIR: Mr. Chairman and Members  
3 of the Commission, a number of the questions that  
4 normally would be covered in my re-examination have  
5 been cleaned up through the questions of my friend  
6 Mr. Cumming, and I therefore would expect that anyone  
7 reading the transcript would read it in its entirety  
8 on the various issues and would thereby put the  
9 whole complex of questions and answers together.  
10

11 There is one other place in the transcript  
12 where there was confusion between the R<sup>2</sup>  
13 the confidence interval, which I don't intend to  
14 discuss because this is a technical matter. Any  
15 person who is confused by reading the transcript would  
16 clear it out in his own mind or, failing that, would  
17 get a statistician.

18 THE CHAIRMAN: Well, the Commission has its  
19 advisors.

20 MR. SINCLAIR: That is right. So this  
21 leaves one matter, as I recollect, during the  
22 examination of Dr. Edwards which I feel might be cleaned  
23 up a little bit.  
24

25 ----

26  
27 RE-EXAMINATION BY DR. SINCLAIR:

28 Q. Dr. Edwards, during Mr. Mauro's cross-  
29 examination, he was speaking to you about the variability  
30 of train expenses, fuel and crew wages, and he was







1 asking you about scheduled trains and he was talking  
2 about some fixed element of cost arising from there  
3 being scheduled trains. Do you remember that series  
4 of questions he put to you?  
5

6 A. Yes, sir.

7 Q. Do you know, Dr. Edwards, what action  
8 the railways take concerning adjusting scheduled trains  
9 to the volume traffic?

10 A. I know that the despatching staff have  
11 their responsibilities of maintaining the most economic  
12 movement of annulling trains if there is not the traffic  
13 to require their movement, and I note that at intervals,  
14 twice yearly, I understand, the operating staffs review  
15 all train operations, and the scheduled train opera-  
16 tors are included therein in relation to the need for  
17 these trains based on the traffic to be handled in them,  
18 and despatchers would have the right with these  
19 manifest trains to annul them if there was not suffi-  
20 cient traffic to warrant their movement in a short-  
21 term period.

22 MR. SINCLAIR: I think that is all I have,  
23 Mr. Chairman. Thank you.

24 BY COMMISSIONER GOBEIL:

25 Q. Dr. Edwards, you had a long argument  
26 with Mr. Cumming and Mr. Mauro about empty car movement,  
27 and it seemed that it is very difficult to determine  
28 or to allocate it. I mean, as a matter of fact, you  
29 mentioned to Mr. Mauro that it is easy to lose a car  
30 to a line where you have no records. So this element





1 of empty cars-- is it easy to make a distinct alloca-  
2 tion with no errors?

3 A. Well, the problem is in the best way  
4 to go about it to relate the empties to the movement  
5 being studied. You never lose the movement of the  
6 cars because the railroad that has your car on its  
7 line reports back and has to pay per diem  
8 for the use of that car. So the car, broadly, can  
9 be traced. Now, it is harder to trace the individual  
10 car off your line than it is on your line where you have  
11 the complete record.  
12

13 Q. In view of the question asked by Mr.  
14 Mauro, I assume -- I may be wrong -- that there is  
15 doubt expressed as to the allocation of costs for  
16 empty cars, and I was wondering how it could compare if  
17 you look at the exhibit of the joint railways, Exhibit 45,  
18 for instance. You have there on page 31 --

19 A. Could I find this first so that I can  
20 follow you, Mr. Commissioner?

21 THE CHAIRMAN: Page 31.

22 COMMISSIONER GOBEIL:Q. You have for both  
23 railways in the table there loaded car miles and  
24 empty car miles, which is for both railways, and it is  
25 about 30 per cent of the loaded.

26 A. No, I think they would be higher than  
27 that, would they not? You have for the Canadian  
28 National 117 million loaded car miles, and empty move-  
29 ment 67 million. We have the proportions there.

30 Q. What is it?







1  
2 A. It is 57 per cent on the C.P.R. and  
3 57 per cent, likewise, within a fraction, on the  
4 Canadian National.

5 Q. 57 per cent of the loaded ton-miles of  
6 the total?

7 A. Oh, of the total?

8 Q. Yes?

9 A. Of the total the empties are 36 per  
10 cent on the Canadian National and on the C.P.R. --  
11 well, 75 over 205. It has to be about 37 per cent.

12 Q. I was wondering if the grain traffic  
13 is supposed to represent per ton-mile 40 per cent in  
14 the West?

15 A. Yes, sir, 40 per cent to 42 per cent.

16 Q. If you would simply apply 40 per cent  
17 of the empty car movement to grain, would it give a  
18 figure higher for empty car than the figures that we  
19 have now, or lower?

20 A. I don't know. These empties here  
21 must be box car empties. So we first would have to  
22 isolate the empty box car loads, and then we have the  
23 problem that the grain loads are heavier than ordinary  
24 traffic.

25 Q. It would be most unorthodox, I presume,  
26 just to say that since the grain traffic was 40 per  
27 cent of the total, simply apply an arbitrary rule and  
28 say we charge to it 40 per cent of the empty cars.

29 A. No, I have never heard of that being  
30 done. There are only about three ways you can do it.





1 One uses the average ratio for all the cars, of the  
2 box car type, of course, take the ratio of empty loads  
3 for the entire system, and without any relationship to  
4 whether there is a particular pattern of this movement.  
5 The other way is to trace the prior empty movement  
6 where the car was unloaded with machinery to where it  
7 moved to be loaded with grain; or you can take the  
8 subsequent movement where it was made empty with grain  
9 and the miles it ran to the next load and use that as  
10 your empty car miles. It was thought that this  
11 traffic was of a very large volume, and the prior  
12 movement was used. Canadian National ran a subsequent  
13 test in addition and found it added very substantially  
14 to the car miles and the car days required to reach  
15 the next load.  
16

17 Q. On another subject, Dr. Edwards, Mr.  
18 Mauro had a very lengthy discussion with you on those  
19 multiple regression tests. I understood he was  
20 inclined to believe that the only standard which would  
21 be good would be the one which you had applied at 5 per  
22 cent, and that the 10 per cent which was used in  
23 Canada was not too good. You never want apparently  
24 to make a definite statement on that. I think I could  
25 understand you. But is it not the case that the  
26 more samples you have the smaller your standard of  
27 error should be?

28 A. That is right.

29 Q. And is it not the case also that the  
30 more factors you have in any cost study that you make







1  
2 your standard deviation or standard error could be  
3 wider and yet it would be significant.

4 A. Wider than this 95 per cent confidence  
5 interval?

6 Q. Yes.

7 A. Should be significant?

8 Q. Yes.

9 A. Well, not being a born mathematician,  
10 I might think it would be helpful if it was referred to  
11 one of these gentlemen, if they cared to answer that  
12 question, to what extent one might rely upon something  
13 lower than 95 per cent confidence interval.

14 MR. BANDEEN: The point is that you have to  
15 study each individual regression that is being run,  
16 and you cannot make a general statement that the 5 per  
17 cent level is the only one which will give you a  
18 significant answer. There are lots of cases in which  
19 you would go much lower than that, but it depends  
20 entirely on your records and the data you are using  
21 with the size of sample and the other factors under  
22 consideration.

23 Q. If you make a test study of a line for  
24 which there are no topographical factors, there are no  
25 climatic factors, just the ordinary business, then the  
26 95 per cent might be not as good as another one where  
27 you have 90 per cent with topographical conditions.

28 MR. BANDEEN: That is quite right. The  
29 other factor that I think should be clarified is that  
30 you were referring here to the standard error, and in







1 both cases we used the T test which, as you know, is  
2 a special test used for small samples. I would  
3 suggest that on smaller samples, if you had used the  
4 standard error, we would have got a higher confidence  
5 interval than in the T test. So we were using a more  
6 stringent test. It is necessary to use the T test on  
7 small samples such as the railways were using.

8  
9 Q. In the samples you did in the United States  
10 study you had more samples than you had here in Canada.

11 A. No. By and large the regression  
12 analyses were based on individual roads, separate  
13 roads, and where there are more severe problems of  
14 different standards, maintenance, as between the roads.  
15 In both cases, there and here, the use of regression  
16 analysis and its effect on the study was largely on  
17 the maintenance of way accounts. So that this  
18 analysis -- we had more roads to work with, but we  
19 had more problems of consistency between roads in the  
20 standards of maintenance as between the roads. In  
21 other words, we tried to measure the effect of density  
22 on maintenance of way expenses.





1 But standards of maintenance themselves differ  
2 between roads so that we had the complicating problem  
3 of measuring differences in managerial divisions and  
4 density. On these rates they had the advantage  
5 that their regressions were run, cross-section analysis  
6 was between divisions, and each road had some thirty  
7 divisions to work, thirty sets of observations within  
8 their own company. The standard of maintenance  
9 within each road presumably would be consistent, be-  
10 cause their maintenance was governed by the same  
11 management staff.

12  
13 COMMISSIONER GOBEIL: Q. If you would  
14 have had two or three times more observation in the  
15 United States to base your cost study on, one would  
16 expect, of course, that your standard of error would  
17 be smaller and you would not accept 90 per cent,  
18 but if you had less maybe you would have to accept  
19 90 per cent.

20 A. I presume that would have been true.  
21 By and large we worked, the comparisons were based  
22 upon two standard errors, plus and minus from the  
23 coefficients we determined, and that spread was  
24 evaluated as to whether it was generally acceptable.

25 Q. Dr. Edwards, Mr. Frawley presented in  
26 exhibit 141 what seems to me very interesting figures.  
27 Have we something similar to that in Canada?

28 A. No, sir.

29 Q. And looking at this exhibit on the first  
30 page, they give there the cents per dollar revenue,







1 57, and the revenue as a percent of fully distributed  
2 costs, 131. What, in the United States would be the  
3 percentage on wheat compared to fully distributed  
4 costs, the percentage of, I mean, out-of-pocket, of  
5 variable cost, because you said it was the same thing,  
6 out-of-pocket and variable cost, you told me the  
7 other day?

8 A. Wheat in the United States moves at  
9 134 per cent above out-of-pocket cost, and 31 per cent  
10 above fully distributed cost.

11 Q. No, what I mean is here, for instance,  
12 C.N.R. -- both railways, I think, it is the same --  
13 they have shown that their variable costs on moving  
14 grain would be 76.76 per ton mile?

15 A. Oh, yes.

16 Q. And fully distributed will be ---

17 A. Close to one cent.

18 Q. Yes. What would be the same relation  
19 in the United States, how would it come back? Here  
20 it is 76 per cent. In the United States what is the  
21 ratio of variable costs to fully distributed costs,  
22 according to that?

23 A. You are thinking what ratio ---

24 Q. Is it more than 60 per cent?

25 A. You are thinking what is the ratio of  
26 the variable cost ---

27 Q. To the fully distributed cost.

28 A. To the total cost.

29 Oh, the ratio on total variable costs on  
30





1 all railroads in the United States is roughly two-  
2 thirds of their total fully distributed costs.

3 Q. No, but for wheat? From this first  
4 line there I would say it is about 60 per cent; am I  
5 right? The ratio of variable cost to fully distri-  
6 buted cost would be 60 per cent?

7 A. I would have to convert these figures  
8 back to an index. If we take the out-of-pocket  
9 costs as a dollar, now, the question is what would the  
10 fully distributed costs be?

11 Q. I think it comes to 60 per cent.

12 A. I would like to work that out in a figure.  
13 It is not consistent on all commodities because it  
14 depends upon the out-of-pocket costs which vary with  
15 the loading characteristics of the traffic, and the  
16 fully distributed costs added are independent of the  
17 loading characteristics. I would rather furnish it  
18 to you tomorrow.

19 Q. But here it is 76 per cent?

20 A. Yes.

21 Q. And I think there it would come to 60.  
22 I was wondering why that difference of 16 per cent  
23 between the two countries.

24 A. The fully distributed costs here include,  
25 in the total in the distributed costs there is about  
26  $9\frac{1}{2}$  per cent of that money is passenger and LCL deficits  
27 which are not in this study. Likewise these fully  
28 distributed costs are distributed -- the lump sum  
29 amounts to  $\$1\frac{1}{2}$  billion, done by territories, that is  
30





1 distributed on ton and ton mile basis for all the  
2 tons and ton miles within the territory.

3 In your studies that amount is added as  
4 a percentage of the out-of-pocket costs. So that if  
5 the relationship is 76 per cent or 75 per cent, you  
6 are adding in effect 25 cents on 75 cents, so that  
7 you would always add one-third for every commodity.

8 So for these two bases the figures are  
9 somewhat not comparable, but on the heavily-loading  
10 commodities this ratio of 131 would rise somewhat and  
11 it would decrease on light-loading commodities be-  
12 cause, well, one is a percentage extension independent  
13 of loading and the other -- but I would like to work  
14 that out.

15 Q. But I see 60 per cent compared to 76  
16 per cent, and I was wondering where was the 16 per  
17 cent difference, and I thought that I could find 6  
18 per cent, for instance, because in the United States,  
19 if I heard it well through Mr. Frawley yesterday, he  
20 asked you about the cost of capital and you said 6 per  
21 cent?

22 A. Yes, sir.

23 Q. And here it is just double, 12 per cent,  
24 is it not?

25 A. No, sir.

26 Q. Well, 11 per cent?

27 A. You have used  $6\frac{1}{2}$  per cent after taxes.  
28 When we use in studies down there 6 per cent after  
29 taxes, it is a little more than double, because of the  
30







1 52 per cent corporation tax rate.

2 Q. No, but cost of capital, cost of money  
3 is the same ---

4 A. Well, it is within, I think, half ---

5 Q. It is the same expression, has the same  
6 meaning?

7 A. Yes.

8 Q. And I thought you said to Mr. Frawley  
9 yesterday, I guess it was, that 6 per cent was your  
10 cost of money?

11 A. I said we have used 6 per cent as the  
12 cost of money.

13 Q. And here we use 11?

14 A. No. Six per cent is after income taxes,  
15 and since income taxes take roughly half your net  
16 income, to realize 6 per cent to the man who is  
17 putting up the funds you have to earn twice that much,  
18 because the government will take half of it and the  
19 man who puts up the funds takes the other half.

20 So that the 6 per cent return to the  
21 investor, with the government going to take half of  
22 the net income, means you have to earn roughly double  
23 the 6. So that in both cases it is around 11 or 12  
24 per cent that is used.

25 Q. That is most complicated to me. I  
26 put it another way. Here in Canada the C.N.R. in  
27 their valuation of costs of moving grain come up to  
28 a figure of \$46 million. On that they have the  
29 cost of money which is \$14 million. This they  
30





1 obtain by multiplying \$342 million -- I forget the  
2 exact figure -- by 11 per cent. In the United States  
3 would you, instead of multiplying by 11, multiply by  
4 6?

5 A. No, we multiply by 11.

6 Q. Thank you.

7 COMMISSIONER MANN: I have already discussed  
8 it with Dr. Edwards during his cross-examination. I  
9 have no questions now.

10 COMMISSIONER PLATT: You were discussing  
11 with Mr. Mauro just recently transportation costs in  
12 relation to the cost of the product. I thought you  
13 would be interested in knowing that we have had our  
14 ups and downs in Canadian agriculture before, as  
15 they have in the United States. At one time, to  
16 earn a few extra dollars, I worked as a helper in a  
17 grain elevator while another person was away. We  
18 grow more than wheat, we grow oats, and oats is a  
19 somewhat relatively low price.

20 So when a farmer brought in a load of oats,  
21 when he came to settle up, he owed the company 75 cents  
22 for freight. He was most apologetic about this  
23 because the poor man did not have any money at all.  
24 So I said: "Just let it go." He said: "We can't do  
25 that." "Well," I said, "bring in a chicken some  
26 time," which were good things in those days. Well,  
27 one week later he came in with two chicken. Then  
28 I was a little embarrassed. I said: "One chicken  
29 would have been fine." He said "Yes, but I am going  
30







1 to bring another load of oats for you."

2  
3 At page 12923 of yesterday's record, there  
4 was some discussion there about the effect of this  
5 increase in the Crow rates on net income of a farmer;  
6 and while you may never be back in Canada because we  
7 are here in the process of settling all the problems  
8 we have got here, in the United States you still have  
9 some agricultural problems that you have got to deal with  
10 and some of those things you may be quoting down there  
11 may not apply here.

12 I think there was a little confusion, and  
13 everybody was getting in the act, giving suggestions,  
14 but the impression got abroad, although the record  
15 does not make it quite clear, that this would be in  
16 the neighbourhood of 8 per cent. Then Mr. Sinclair  
17 pointed out that 12 cents increase in freight at  
18 \$1.50 would come to 8 per cent.

19 Now, this is not, of course, evidence in  
20 these particular studies, but it does not represent the  
21 difference in the farmer's take-home pay. In the  
22 first place, No. 1 wheat represents less than 2 per  
23 cent of wheat sold, let alone other grain, and all of  
24 these things have different market value.

25 The other thing, of course, was that this is  
26 calculated on gross income and not net, and even on a  
27 farm there is some slight difference between gross  
28 and net. I thought perhaps you would want to have  
29 that clarified in case this is read to you when you  
30 are next in California talking about lettuce.





1  
2 THE WITNESS: I am glad to have that point  
3 raised. The net effect would be substantial.

4 THE CHAIRMAN: Thank you very much, Dr.  
5 Edwards. You have had four long days in the box and  
6 we have appreciated your evidence very much. Thank  
7 you.

8 THE WITNESS: It has been a great privilege  
9 to have had the opportunity of appearing.

10 MR. SINCLAIR: Maybe we could take two  
11 minutes so that we could get some of these other  
12 documents in here.

13 THE CHAIRMAN: You want to start tonight,  
14 Mr. Cumming?

15 MR. CUMMING: I think, Mr. Chairman, by the  
16 time we get started we won't make much progress.

17 THE CHAIRMAN: I think we will adjourn.

18 MR. CUMMING: I may say I won't be long with  
19 Mr. Bandeen and I understand Mr. Mauro does not expect  
20 to take very long. I think we are the only ones.  
21 I think there is every prospect that we will finish  
22 with Mr. Bandeen tomorrow.

23 THE CHAIRMAN: We will take that at ten  
24 o'clock in the morning.

25 ---Adjournment.  
26  
27  
28  
29  
30





*Hon. C. D. McCreery*

**ROYAL COMMISSION**

**ON**

**TRANSPORTATION**

**HEARINGS**

**HELD AT**

**OTTAWA**

**VOLUME No.**

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## I N D E X

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ROYAL COMMISSION ON TRANSPORTATION

Proceedings of hearings held in  
the Court Room, Board of Trans-  
port Commissioners Offices,  
Ottawa, Ontario, on the 3rd day  
of June, 1960.

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E R R A T A

Volume 75

<u>Page</u>	<u>Line</u>	<u>Reads</u>	<u>Should read</u>
13139	11	fogged	plugged
13146	18	53	33
13149	4	track	truck
13151	12	Pacific	National
13152	14	Charging	Checking
13168	28	Churchill	Saskatchewan
13192	13	to be very drastic	to increase very drastically
13193	30	Car	our
13201	13	Grain	Train
	27	the ton miles and the gross car miles	the gross ton miles and the car miles
13208	26	allowed	required
13212	23	Minnesota	Manitoba
13217	11	---	Wakopa
13221	7	---	Wakopa
	16	are variable	are not variable
13222	29	155	955
	30	no traffic there even	any trains
13246	2	which has one or two other expenses	which was one hundred per cent of expenses
13261	4	- as	a period after "equipment" is
13267	9	-	insert "40" after page
13277	10	even on	even to meet
13283	5-6-8	recharged	agreed charge
13289	19	delete "variable cost"	





Ottawa, Ontario,  
Friday,  
June 3, 1960.

---On commencing at 10.00 a.m.

THE CHAIRMAN: Order, please.

MR. BURBIDGE: Mr. Chairman, before the cross-examination of Mr. Bandeen begins, we have a number of statements here arising out of the cross-examination of Mr. Stenason which we would like to file as exhibits. These are answers to requests made of Mr. Stenason, and the first is a request of Commissioner Balch found at Volume 66, page 11701, and the statement shows the calculation of percentage of grain moving in solid trains from Winnipeg to Fort William, and we can file this as Exhibit 142. We have a number of copies here, and more will be available next week.

---EXHIBIT NO. 142: Percentage of grain moving in solid trains from Winnipeg to Fort William.

MR. BURBIDGE: The second is a request of Mr. Mauro found in Volume 66, page 11735, and the statement shows a breakdown of joint facility rents by provinces in western Canada, year 1958. That will be Exhibit 143.

---EXHIBIT NO. 143: Statement showing breakdown of joint facility rents for provinces in western Canada.

MR. BURBIDGE: And the final one is a request of Mr. George Cumming found in Volume 69, page





1 12346, and it shows the solely related branch lines  
2 which would remain uneconomic at various stated average  
3 revenues per ton mile for grain and grain products, and  
4 you will recall that was a request to show the solely  
5 related branch lines which would remain uneconomic at  
6 75 cents and at 90 cents and at one cent, and the  
7 statement shows these by subdivisions and the date of  
8 construction and the mileage, and that is Exhibit 144.  
9

10 ---EXHIBIT NO. 144: Statement showing solely  
11 related branch lines which  
12 would remain uneconomic at  
13 various stated average revenues  
per ton mile for grain and grain  
products.

14 MR. BURBIDGE: Now, that completes the re-  
15 quests made of Mr. Stenason, with the exception of a  
16 memorandum on taxes which is in the course of prepara-  
17 tion, and if we have overlooked anything, then the  
18 person making the request can draw it to our attention.

19 THE CHAIRMAN: Mr. Cumming?

20  
21 ROBERT ANGUS BANDEEN, called

22 CROSS-EXAMINATION BY MR. CUMMING:

23 Q. Mr. Bandeen, on May 10th, when we were  
24 here last, my friend Mr. Sinclair filed what is now  
25 Exhibit 132, a statement setting out a number of  
26 revisions, both upward and downward, in the cost  
27 study produced by Canadian Pacific which he described  
28 as being the result of various suggestions made during  
29 the consultations and conferences between the railway  
30 experts and other consultants, and I note that Canadian







1 National has not introduced a similar set of revisions.  
2  
3 I wonder if you could tell us why your cost study doesn't  
4 have changes of the order and the nature that came in  
5 through Exhibit 132?

6 A. Perhaps it would be best if we were to  
7 go through Exhibit 132 point by point and explain why  
8 we did not need to put in the corrections that the  
9 C.P.R. did.

10 If we could go to Exhibit 132, page 2, the  
11 C.P.R. has included a figure of \$48,024 as revenue  
12 collected from local demurrage on grain products. Now,  
13 we have made an attempt to get a similar figure. We  
14 have been unable to get the figure from the Freight  
15 Car Demurrage Bureau. Their reply to us was that in  
16 our case the only figure they could give us would be  
17 a gross figure which would be of a negligible amount,  
18 and they doubted, if they were able to calculate the  
19 rebates, that it would be of any significance.

20 On page 3, under Item 1, the first point is  
21 track maintenance and depreciation, and the (a) part  
22 of that was to correct an error which occurred in the  
23 C.P.R.'s working papers, and the (b) part of it was an  
24 adjustment of yard time resulting from additional field  
25 studies. Now, the Canadian National did not feel that  
26 it was necessary to do these additional field studies.  
27 The situation of the Canadian National is somewhat  
28 different than that of the Candian Pacific, and a com-  
29 parable adjustment is not indicated. There are basic  
30 differences in switching operations which arise out of





1 the variations in the pattern of lines. The Canadian  
2 National, unlike the Canadian Pacific, does not serve  
3 the lakehead from its main traffic artery. The heavy  
4 volume of grain traffic is handled eastward from Winni-  
5 peg over a separate line passing through minor ter-  
6 minals at which the small amount of switch engine time  
7 involved was readily related to the through movement.  
8 The character of Canadian National operations is again  
9 significantly different to the west, with secondary  
10 main lines to the north and south of the main line,  
11 and with grain traffic moving eastward on separate  
12 routes through small intermediate terminals to be  
13 consolidated at Winnipeg.  
14

15 The pattern of the Canadian National service  
16 includes also the export position at Churchill, move-  
17 ments to which pass through only our small terminal  
18 facilities, is to some extent similar on the movement  
19 to the Prince Rupert line. The switching service  
20 accorded grain traffic on the Canadian National repre-  
21 sents, therefore, a high proportion of handlings at  
22 small terminals where a separation between through and  
23 local traffic would not be significant.

24 The effect of these differences has already  
25 been reflected in the study results.

26 Our calculations of the switch engine time  
27 attributed to classification switching of grain at  
28 terminals other than the principal marshalling and  
29 destination points averaged 1.2 minutes per car. We  
30 are informed that this is within the lower range of







1 the figures for switching of through traffic as  
2 developed in the supplementary studies conducted by  
3 the Canadian Pacific Railway.

4 In so far as the Canadian National is  
5 concerned, therefore, our analysis indicates that the  
6 problem of separation between through and local  
7 switching does not have the same bearing, and that the  
8 study results properly reflect the total minutes of  
9 switch engine time attributable to the handling of  
10 this traffic.

11 The second point under Item 1, on page 3 of  
12 Exhibit 132, is a correction to include depreciation  
13 which I believe was overlooked in the first instance  
14 by the C.P.R., and we have already included the  
15 depreciation in our study.

16 The maintenance of water and fuel stations,  
17 point No. 3: this was a recalculation based on the  
18 actual fuel and wage expenses separately. In the  
19 Canadian Nation's case we had a different basis for  
20 allocating this account in the first instance and  
21 saw no reason to change our basis.

22 Point 4, maintenance of signals. Again  
23 in the initial regression models the Canadian National  
24 had a different model than the Canadian Pacific. We  
25 included in the accounts the maintenance of the signals,  
26 the operation of the signals and despatching, and the  
27 theory behind this was that as the traffic density  
28 increased the signals on the line would increase and  
29 the despatching costs would have a tendency to decrease.  
30





1 Consequently, we felt that the portion of expenses  
2 allocated or determined from this account should be  
3 charged against branch line traffic as well as main  
4 line traffic because despatching is necessary for both  
5 of them.

6 The fifth item on page 3 of Exhibit 132  
7 is a correction which results from the adjustments  
8 listed as 1, 2, 3 and 4.

9 On page 4 of Exhibit 132, Item 6, road  
10 locomotive repairs and yard locomotive repairs: Point  
11 A under this deals with steam repairs which we did not,  
12 of course, include since the Canadian National statement  
13 is purely on a diesel basis.

14 Point B. diesel locomotive repairs expenses  
15 segregated in the accounts between yard and road but  
16 not between passenger and freight. Well, in the  
17 case of Canadian National this is separated in the  
18 accounts between freight and passenger, so we already  
19 had this refinement in without the necessity of  
20 a special study.

21 Point C is a reduction in yard locomotive  
22 time as a result of further field studies, and I have  
23 already dealt with this point.

24 Point No. 7 on page 4 of Exhibit 132 deals  
25 with road locomotive depreciation and yard locomotive  
26 depreciation, and the reasons for the change in the  
27 Canadian Pacific exhibit were already outlined under  
28 Point 6, and I have explained why they did not apply  
29 to us.  
30





1 Point 8 on page 4 of Exhibit 132 deals  
2 with freight car repairs and freight car depreciation.  
3 The C.P.R., as I understand it, has separated out the  
4 inspection costs from the freight car repairs and  
5 distributed the inspection costs on a car mile basis,  
6 with remaining freight car expenses, maintenance ex-  
7 penses, being distributed 70 per cent on car miles and  
8 30 per cent on car days.  
9

10  
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13 (Page 13136 follows)  
14  
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1 We went back to our accounts and studied this  
2 situation and determined that if we were to apply in-  
3 spection on a car-mile basis alone rather than on a  
4 70 per cent car-mile and 30 per cent car-day basis,  
5 that it would slightly increase our car maintenance,  
6 but only an insignificant amount. So we chose not to  
7 make this correction.  
8

9 The C.P.R. also refers in that point to  
10 utilizing only the experience on their own cars and  
11 removing the experience of foreign cars, and we already  
12 had done this in the initial study.

13 Point No. 9 on page 5 of Exhibit 132 results  
14 from the adjustments already listed and since ---

15 Q. The same comments apply.

16 A. The same comments apply. On page 5 of  
17 Exhibit 132 under item III, point No. 10, fuel and  
18 crew wages. The (a) part of the C.P.R. change was a  
19 calculation based on fuel and crew wages separately  
20 which made it possible to assign vacation expenses to  
21 crew wages directly.

22 The Canadian National had already done this  
23 in their original presentation.

24 The (b) part deals with changes in switching  
25 minutes -- no, I am sorry -- changes of way switching  
26 minutes, and the way switching wages based on local  
27 freight only.

28 The Canadian National had already included  
29 the way switching wages on the local freight only.

30 Point No. 11, train engine house expenses and





1 other supplies, was a correction of a clerical error  
2 of Canadian Pacific and needs no further explanation on  
3 our part.  
4

5 Point No. 12 on page 5 of Exhibit 132 deals  
6 with yard masters and clerks, yard expenses and yard  
7 other expenses. Now, these changes arose from the  
8 re-statement of yard time that we have already dealt  
9 with, and in addition from the inclusion of an allowance  
10 for the heavier switching under winter switching  
11 conditions.

12 Q. Perhaps you might deal with this question  
13 of winter switching conditions here. Are you making  
14 any adjustment at all for winter switching conditions?

15 A. No, the Canadian National has made no  
16 adjustment for winter switching conditions. We  
17 developed some figures from our general yard records  
18 for four to five of our principal terminals  
19 comparing winter and summer operations in terms of  
20 average cars per engine hour. These did indicate that  
21 there was a definite increase in switching costs under  
22 winter conditions. However, it was decided that no  
23 allowance would be made in this connection, although  
24 in reaching this decision we were aware that we would  
25 be to some extent understating the switching effort  
26 which might properly be attributed to the handling  
27 of the study traffic.

28 Q. I was going to ask you, is your problem  
29 a lack of ability to measure it?

30 A. Yes, the few figures which we developed







1 confined to the principal terminals on the prairies,  
2 suggested that the added cost of winter work might  
3 range from 7 per cent to 28 per cent at individual  
4 terminals. There was no attempt made, however, to  
5 weight these figures for the relative volume of grain  
6 handled, and I have no knowledge of what the probable  
7 range of adjustment might be for the movement of study  
8 traffic as a whole.  
9

10 On point 13 on page 5 of Exhibit 132, train  
11 locomotive water would not be of any significance in  
12 the Canadian National Railways study since we costed  
13 our study on a purely dieselized basis and eliminated  
14 the steam operation.

15 Q. Before you go on, Mr. Bandeem, one other  
16 question that was suggested to me in connection with  
17 this winter switching. Could some of the extra time  
18 that is involved, as you see from your study of what  
19 I suppose are the switching lists, be attributable  
20 to a lower volume of traffic moving generally in the  
21 winter periods?

22 A. Well, this is a very difficult question  
23 to answer because it is difficult to separate the  
24 effect of the winter conditions from a possible decrease in  
25 volume. However, I cannot see that the decrease in  
26 volume would be of any great significance in the higher  
27 switching time per car.

28 Commissioner Balch would be much more able  
29 to state this than I, but the winter conditions are  
30 severe on the prairies where the study was primarily





1 taking place, and they do add greatly to the time and  
2 to the cost of switching.

3 Q. They are not severe in Vancouver, are  
4 they, Mr. Bandeem?

5 A. I understand not. From personal  
6 experience I am afraid I do not know.

7 MR. SINCLAIR: Well, the fog ---

8 THE CHAIRMAN: Or Victoria.

9 A. Or Victoria, yes, but they are in  
10 Winnipeg. As I understand it, our yards can often be  
11 completely fogged under a condition of ---

12 MR. CUMMING: Q. In Winnipeg I am sure.

13 A. In a blizzard condition.

14 MR. CUMMING: That is news to some of the  
15 people who are present.

16 MR. SINCLAIR: They are in Florida at that  
17 time.

18 THE WITNESS: Point 14 on page 5 of  
19 Exhibit 132, grain doors, the C.P.R. made a correction  
20 to cover the use of a wrong figure of carload traffic.  
21 In our particular case we did an actual study of the  
22 expenditures on grain doors and we have no reason to  
23 change it.

24 Item 15 on page 6 of Exhibit 132 is signal  
25 operation, and I have already explained our position  
26 on this under item 4.

27 Item 16 is loss and damage, freight. Canadian  
28 Pacific applied a three-year average in developing  
29 unit costs. The Canadian National used the actual  
30





1 claims in 1958, and we saw no reason to change this.

2 Item 17, train other supplies. The C.P.R.  
3 re-stated their train other supplies to reflect the  
4 conditions in the Western regions.

5 The Canadian National had already stated  
6 their train other supplies on the basis of the Western  
7 region figures.

8 Item 18, joint facilities and insurance,  
9 arises from the adjustments previously discussed.  
10 The Canadian National, as we have stated in our precis,  
11 put in the actual joint facility costs as we found  
12 them to exist as applied to grain.

13 Item 19, cost of money. Under the (a) point  
14 of this, the C.P.R. has re-stated freight car investment  
15 on a car-day rather than a car-mile basis. The  
16 Canadian National had stated the freight car investment  
17 on a car-day basis in the first instance.

18 Item 19(b), reduction investment in yard  
19 locomotives, which arises from the reduction in  
20 switching time, I have already dealt with.

21 Item 20, solely related costs. Part of  
22 this change arose, I believe, from the error in  
23 inversion of figures which were listed under item 1,  
24 and the C.P.R. also reduced their number of miles by  
25 17.6. We have no similar adjustment.

26 Item 21 is traffic and general, and that  
27 was changed to reflect the changes already discussed,  
28 and so we do not have any adjustment in that respect.

29 Then on page 7 of Exhibit 132, the constant  
30







1 costs are dealt with and the Canadian Pacific has re-  
2 calculated their constant costs and treated constant  
3 costs as a residual cost, the difference between total  
4 expenses and the variable costs of freight and  
5 passenger.  
6

7 Canadian National has treated constant costs  
8 in this fashion in the original submission.

9 In addition, the Canadian Pacific has  
10 revised the miles of track to reflect track maintained  
11 rather than operated, and to eliminate joint section  
12 mileage.

13 The Canadian National had used track maintained  
14 and did not include joint section mileage in the  
15 original instance.

16 I believe that that is all the changes made  
17 in Exhibit 132 by the Canadian Pacific. None of them  
18 apply to the Canadian National so we have not submitted  
19 any changes.

20 COMMISSIONER BALCH: Mr. Cumming, would you  
21 mind if I just asked something which has occurred to me.  
22 Mr. Bandeem, how do you allocate costs for train wreck?  
23 Sometimes there is a terrific amount for train wrecks.

24 A. I would have to find what account that  
25 went into to deal with that.

26 Q. It is counted eventually, is it?

27 A. Yes.

28 Q. In costing?

29 A. Yes, it would be. I would want to find  
30 what account that was included in in our uniform





1 classification of accounts.

2  
3 COMMISSIONER BALCH: You need not do it now,  
4 but it just occurred to me, and also floods and so  
5 forth.

6 THE WITNESS: I think maybe we should look  
7 that point up for you, unless somebody can tell us  
8 immediately where it is included.

9 MR. SINCLAIR: Account 415.

10 THE WITNESS: It is treated as an overhead  
11 account in transportation. It is put in as super-  
12 intendence and overhead, and in our costs the super-  
13 intendence and overhead was divided on a basis of  
14 train miles and locomotive miles in the particular area.

15 COMMISSIONER BALCH: Thank you.

16 MR. CUMMING: Q. That appears on  
17 Statement NR3-9, sheet 3 of 6.

18 A. Yes, sheet 3 of 6, the first item.

19 MR. MAURO: Train wrecks were found to be  
20 variable with the ---

21 MR. SINCLAIR: Train miles.

22 MR. MAURO: Train miles.

23 THE WITNESS: Train miles and yard loco-  
24 motive miles.

25 MR. CUMMING: Now, Mr. Bandeem, I would  
26 like to pass to something else. Through this cost  
27 study, we have seen the use of statistical inference  
28 methods. Have you used multiple regression in  
29 previous cost studies for Canadian National?

30 A. We have been using regression internally







1 for costing purposes in the Canadian National for, well,  
2 at least ten years, and it was developed after the  
3 war, I believe, although I must -- I was not around at  
4 that time so I am not speaking from experience but only  
5 reading files; but we have used the regression methods  
6 internally, I know, as early as 1950 and we have been  
7 developing them ever since and incorporating them into  
8 our costing procedures, internal costing procedures.  
9

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24 (Page 13146 follows.)  
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1 Q. Its application, I gather from Dr.  
2 Edwards' evidence, is limited to certain classes of  
3 accounts and by far the greater proportion of the  
4 accounts which have been examined and analysed in these  
5 cost studies are dealt with and distributed on more  
6 conventional costing techniques? Is that a fair  
7 way of putting it?  
8

9 A. Yes. I wouldn't say its application  
10 is limited to certain accounts; it is only needed in  
11 certain accounts and these accounts are concerned  
12 primarily in the maintenance of roadway accounts --  
13 that group of accounts -- where it is difficult to  
14 separate the expenses attributable directly to the  
15 various traffic movements.

16 Now, in the case of Canadian National, in  
17 the present grain cost study, of all the variable cost  
18 only some 53 per cent was derived from regression  
19 models -- the result of regression models; and this is  
20 primarily in the road maintenance account, and, to a  
21 certain extent, in the transportation. But a con-  
22 siderable number of accounts render themselves much  
23 more readily to direct allocation of cost. I am  
24 thinking here of the fuel expenses and crew wages . . .

25 Q. Grain doors?

26 A. Grain doors, yes; there has been no  
27 need to use multiple regression because you can get  
28 the actual expenditure.

29 Q. I presume it is a method that you pro-  
30 pose to continue using in your cost studies going on





1 over the years?

2 A. Oh, very definitely. We are already  
3 incorporating the results -- have incorporated the  
4 results -- that we used in this Crow's Nest Grain study,  
5 and we are going on attempting to find refinements in  
6 the method.

7 So far as Canadian National is concerned we  
8 have a group in our Cost Section whose chief job is  
9 to be always on the lookout for better methods of costing.

10 Q. With that in mind I suppose it might be  
11 fair to suggest that if a cost study were done on this  
12 grain traffic five years from now quite different re-  
13 sults might well be obtained?

14 A. I doubt that the results would be sig-  
15 nificantly different. The method of arriving at the  
16 results might be; but I have no reason to believe that  
17 the actual dollar value might be different; but we  
18 might be able to have some additional refinements on,  
19 say, the allocation of cost and get the best estimate  
20 of cost; maybe in the future we will be able to document  
21 the statistics so that we have some concrete proof of it.  
22 But I have no reason to believe that there would be any  
23 change of it, significantly, in the total dollars in-  
24 volved.

25 Q. Do I take it that through the cost  
26 studies there are areas in which the allocation of cost  
27 has been on the basis of a matter of judgment rather  
28 than a matter of science, shall we say?

29 A. Yes; judgment and past experience both  
30







1 of our own company and on the American railways.

2  
3 Q. Have you used these regression techniques  
4 to check cost studies which had been done previously  
5 to the use of different methods?

6 A. As a matter of fact, we have done that  
7 recently, but I should think that a better example of  
8 this would be that approximately two months ago we  
9 were asked to do a cost job by our Traffic Department  
10 on a movement in the prairie provinces, and just for  
11 our own experience we did the costing on the basis  
12 that we were using previous to any of the results of  
13 the Crow's Nest study -- in other words, something  
14 that was in use a year ago -- and then we did it on the  
15 methods using all the refinements and changes that we  
16 had introduced into the Crow's Nest method; and the  
17 difference was less than one-half of one per cent of  
18 the costing, if I remember correctly. So, if nothing  
19 more, this validated at least the costing methods that  
20 we had been using previously -- at least, in my mind it  
21 did.

22 That answers, somewhat, the question that you  
23 have just asked me -- would we use a different method  
24 in five years? -- and I said we probably would. But  
25 the results probably wouldn't be significantly different  
26 in the actual dollar figure.

27 Q. You used the expression "using cost  
28 studies internally" a couple of times. To what extent  
29 are cost studies used internally? Just what do you  
30 mean by that in Canadian National?





1  
2 A. Well, in the Canadian National the Cost  
3 and Statistics Branch is a part of the Research and  
4 Development Department, and all costing of both rail  
5 and track cost is referred to this branch of which I  
6 am the head at the moment, to determine the variable  
7 cost of the movement.

8 Q. There is a suggested element of lack of  
9 security of tenure there, Mr. Bandeem!

10 A. I didn't intend to suggest that.

11 Since January 1st of this year, as an example,  
12 we have had 230 requests for costs, which we have pro-  
13 cessed, and each one of these requests may involve one  
14 movement or it may involve several hundred movements.

15 Q. These requests, I assume, come largely  
16 from your traffic people or rate people?

17 A. They come from the Traffic Department  
18 and from the Road Transport Department.

19 I think I should just explain to you which of  
20 the movements they ask us to cost. They have, in  
21 the Traffic Department, a very good knowledge of the  
22 approximate cost of the movements, from their long  
23 experience, and when they are in the business of setting  
24 rates they often know from their previous bench marks  
25 and from their experience that a rate is high enough --  
26 that there is no question of it being anywhere near the  
27 variable cost and, therefore, no question of it not  
28 being compensatory.

29 However, when they get a request in for a rate  
30 on a movement in which there is any doubt in their mind







1 and if they think the rate may not be compensatory,  
2 or they may not be able to quote on it because of  
3 competition they send the particular movement to us and  
4 ask us to supply them with the variable cost of moving  
5 the traffic.

6  
7 Q. You say you supply them with the variable  
8 cost?

9 A. Yes.

10 Q. Is that the only figure you give them?

11 A. Yes.

12 THE CHAIRMAN: What size of staff have you?

13 THE WITNESS: We have about 130 people in the  
14 department, and I would say 35 of them devote them-  
15 selves to costing these railway movements.

16 We have just recently decentralized and have  
17 cost representatives in Winnipeg, Toronto and Moncton,  
18 because around these areas there are immediate re-  
19 quests come up where the Traffic Department has to  
20 have a decision in a hurry and so we have people on the  
21 local ground.

22 When I say we have handled 230 requests since  
23 January, we haven't handled the 230 requests in the  
24 detailed way in which we handled the Crow's Nest grain  
25 rate, but ordinarily we can satisfy our traffic people  
26 of the range of the variable cost, and without detailed  
27 study and without having to trace cars and all the other  
28 refinements we have included in here; and what we would  
29 give them would be sure to be a maximum variable cost  
30 which, for their rate, is above -- sufficiently above --





1  
2 for their purposes that they know that there is no  
3 problem of the rate being compensatory or not.

4 But in some cases that are really marginal  
5 we have to go into detailed studies approaching the  
6 intensity of the Crow's Nest study.

7 Q. Why do you give the rate to the traffic  
8 people at variable cost? Why don't you tell them as  
9 well what the fully distributed cost is of any particu-  
10 lar movement that you are examining?

11 A. Well, I don't want to repeat what Dr.  
12 Edwards has said in the last few days -- and so ably  
13 said -- on rate making -- but in the Canadian Pacific  
14 the bench marks from which our traffic people start in  
15 making a rate -- the only cost figure that they are  
16 interested in is the variable cost of the movement;  
17 and how much above that they set the final rate is a  
18 problem that is not a science -- I think it is more an  
19 art. Maybe I am being unfair; perhaps I don't con-  
20 sider it a science because I don't understand it and  
21 wouldn't attempt to do it myself. But we have never  
22 supplied fully distributed cost internally to the  
23 traffic department.

24 Q. Even for large volume movements?

25 A. Well, we have never done a large volume  
26 movement previously such as the Crow's Nest grain --  
27 previous to that particular study.

28 Q. Well, I suppose there aren't any rail  
29 movements in the country that are of so large a volume  
30 for a single commodity as that?





1  
2 A. I can't think of one at the moment.

3 Q. But having that in mind, that, as a  
4 matter of ordinary practice, you don't go into the  
5 question of fully distributed cost and that you confine  
6 yourself to variable cost, can you explain to us what  
7 the purpose of going into full cost in this particu-  
8 lar study might be?

9 A. Well, as we have stated in the precis  
10 we calculated the variable cost first and then we  
11 felt that, since the concept of fully distributed  
12 cost was so prevalent and so familiar, particularly  
13 in the United States, we should calculate that since  
14 it would be an aid to the Commission and also, pos-  
15 sibly, it would serve as a method of charging the  
16 rate which our traffic people would recommend.

17 But I can guarantee you in the case of  
18 Canadian National that our traffic people did not have  
19 the fully distributed cost when they made their con-  
20 siderations about the height of the rate or where it  
21 should be placed. The reason I can guarantee you  
22 is that we had trouble in getting the variable cost  
23 and they were badgering me, I might say, almost night  
24 and day to give them the variable cost, and we finally  
25 were able to produce it, and they prepared their por-  
26 tion of the brief -- Mr. McCoy did -- and had con-  
27 sultations with Canadian Pacific without any knowledge  
28 of fully distributed cost on the Canadian National.

29 Q. But for rate making purposes generally,  
30 as I gather from what you say, the important cost







1 consideration is in every instance the variable cost?

2 A. Oh, yes, of course. If you go below  
3 that -- you can't set a rate below that which is to  
4 the advantage of the railway.

5 Q. I was interested in your comment about  
6 the operation of your own department when you said it is  
7 becoming to some extent decentralized. What is the  
8 purpose of that?

9 A. This is because the Traffic Department  
10 finds that, through competition, and because we may  
11 have taken four weeks in some cases, or longer, to  
12 quote a rate, they have to have information immediately  
13 available to them; and our traffic man in Winnipeg, for  
14 instance, would write us a letter saying that he  
15 would like to have a costing and it would take several  
16 days to get that material and send it back. So that  
17 you have to have somebody right on the ground who can  
18 give them a cost figure sometimes within a matter of  
19 hours if it is really a rush job.

20 Q. The Commission, in its regional hearings  
21 in various places, heard complaints about delay in get-  
22 ting rates. This, I take it, is, to some extent,  
23 the railways' answer to those troubled areas?

24 A. There is one other consideration which  
25 doesn't have to do with the outside shippers directly,  
26 and that is the fact that, having a man in the region  
27 and at a regional headquarters, he has a more intimate  
28 knowledge of the operation of that particular region,  
29 and this is quite essential when you are costing the  
30





1 movement of traffic -- if you know the switching given  
2 to individual traffic moving through particular ter-  
3 minals; if you know that from personal knowledge it  
4 can be an advantage in refining your costing tech-  
5 niques; and also in the way freight operates, and all  
6 the other operations that pertain to the region.

7  
8 Q. So that there are two solid reasons  
9 for the decentralization. One is that you are going  
10 to get a better job done costingwise and the other is  
11 that cost data can be developed?

12 A. That is right.

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17 (Page 13156 follows)  
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1 Q. The cost data can be developed?

2 A. Yes.

3 Q. Can you give us some idea as to the  
4 extent to which the rate structure has been built up  
5 on cost considerations?

6 A. Well, offhand I would find that a diffi-  
7 cult question to answer.

8 Q. Perhaps I might put it this way: do you  
9 think it will be increasingly based on cost considera-  
10 tions?

11 A. By and large our competitive rates  
12 and agreed charges are always based on cost considera-  
13 tions. There would be no thought of putting in a  
14 competitive rate or an agreed charge that was below  
15 variable cost or, for that matter, usually within the  
16 range of variable cost, because we do have to have some  
17 recovery to overhead on any rate to make it compen-  
18 satory.

19 Q. Would you say that competitive con-  
20 siderations, competitive conditions in transportation  
21 are tending to produce a rate structure which is  
22 increasingly cost oriented?

23 A. Well, yes, if you use "cost oriented" to  
24 mean that we are aware of the variable costs and have  
25 to calculate this for the individual movements; but,  
26 it is not related in any fixed way to variable cost  
27 or total cost. The rate, as you know, from listening  
28 to Dr. Edwards, is set on a whole host of considerations  
29 -- elasticity of demand, the market situation; but,  
30





1 I would say what you mean by "cost oriented" was,  
2 does our Traffic Department now have to ask us for  
3 more costing? Yes. I would say they did, and this  
4 will probably continue as competition gets more severe.  
5

6 Q. Have you used the methods of statis-  
7 tical inference in determining the passenger deficit  
8 about which we expect to hear something more later?

9 A. Yes, to the extent we used them for the  
10 grain study, we have used them in the passenger study.

11 Q. Was that done at the same time along  
12 with the development of the costs in the grain study?  
13 Is that what you mean by your answer?

14 A. I mean by the answer there that we have  
15 used regression methods or statistical inference, as  
16 you refer to it, in calculating the road maintenance  
17 costs associated with passenger business, and the  
18 other costs which we calculated in the grain cost study  
19 by using regression methods.

20 Q. Going on to something else, Mr. Bandeem:  
21 a small point that appears on page 3 of your precis  
22 where you say:

23 "The study data includes traffic received at

24 "Edmonton from the Northern Alberta Railway.

25 "In the year 1958, this comprised 3,921 cars

26 "and 202,956 tons."

27 That I understand is the Canadian National's share of  
28 the traffic originating on the Northern Alberta Railway?

29 A. That is correct.

30 Q. Was there any development of prior empty car





1 movement in connection with the traffic moving along  
2 the Northern Alberta Railway and coming onto Canadian  
3 National and Canadian Pacific at Edmonton?

4  
5 A. The Canadian National did not trace the  
6 car movements coming from Northern Alberta Railway  
7 back to their country origin. For the purposes of  
8 this study we considered only the movement of grain  
9 at statutory rates on the Canadian National as such,  
10 and we would pick up the loaded movement of these  
11 grain cars at Edmonton and we would also trace the  
12 empty miles that occurred on the Canadian National in  
13 supplying empty cars to the Northern Alberta Railway  
14 for loading with grain.

15 Q. At Edmonton?

16 A. At Edmonton, but we traced none of the  
17 empty miles on the N.A.R.

18 Q. Are the revenues included?

19 A. The revenues attributable to the N.A.R.  
20 are not included in the study.

21 Q. It has been ignored completely?

22 A. We have taken the division of revenues  
23 that the C.N.R. gets from this traffic, and the  
24 movement of statutory grain on the N.A.R. has been  
25 completely ignored, if you wish to use the term, or  
26 left out of the study.

27 Q. You said you had taken the revenues  
28 the C.N.R. gets: are they included in the revenues  
29 you show in the cost study?

30 A. Yes, and so is the loaded movement from







1  
2 Edmonton to Vancouver or to the Lakehead, wherever the  
3 cars were moving.

4 Q. Well then, there must be some element  
5 of error if you have included in the study the revenues  
6 you get but have not included the costs?

7 A. Oh, we have included the costs of the  
8 movement on our lines.

9 Q. On your own lines?

10 A. Yes, but none of the cars on the N.A.R.

11 Q. And you have not included any revenues,  
12 that portion of the revenue which was earned on the  
13 Northern Alberta line beyond Edmonton?

14 A. That is right.

15 Q. If that has been included, would that  
16 have increased the overall grain deficit by any sub-  
17 stantial amount?

18 A. This would involve us in a cost study  
19 of the grain movement on the N.A.R. and, without having  
20 done such a study, I would, offhand, say that at the  
21 rate they would be getting, which is similar to the  
22 one we are getting, they could not help but be running  
23 at a deficit on this movement and the total  
24 total deficit on statutory grain would be higher than  
25 that reflected by the receipts of the Canadian National  
26 and the Canadian Pacific to the extent the latter  
27 us, I believe, included the N.A.R. If you were  
28 looking at the total picture of the movement of  
29 statutory grain, you would have to include the N.A.R.  
30 deficit as well as the two major railways.





1 COMMISSIONER BALCH: That is only seasonal,  
2 though -- the movement on the N.A.R.?

3 THE WITNESS: I believe so.

4 COMMISSIONER BALCH: In the open weather:  
5 am I right on that?

6 THE WITNESS: No, I think we could move  
7 it all year round. I don't know what the elevator  
8 situation is.

9 COMMISSIONER BALCH: Well, do they store it?

10 THE WITNESS: Oh, this is the N.A.R. -- the  
11 Northern Alberta Railway.

12 COMMISSIONER BALCH: Oh yes, that is right.

13 THE WITNESS: I think it would move all year  
14 round because they probably have farm storage and country  
15 elevator storage. Commissioner Platt would probably  
16 know that.

17 MR. CUMMING: Q. I want to turn to some-  
18 thing else, Mr. Bandeem. We can take it from the  
19 figures that have been put in in this study that the  
20 movement of grain in Western Canada is a very sub-  
21 stantial one?

22 A. That is right.

23 Q. What I wanted to ask you is, is there  
24 any impact on the general level of efficiency of the  
25 railway system in the West because of the existence  
26 of this large volume of traffic which in part, at  
27 least, can be moved at the railways' convenience?  
28 What I had in mind is perhaps this: does that factor  
29 -- that is, your ability to move it to some extent,  
30







1 at least, at your convenience -- improve your cost  
2 picture as regards making up trains, wages and fuel  
3 costs, and so on, and, if there is any such efficiency  
4 arising because of the existence of the traffic, has  
5 that been credited to the grain traffic generally?  
6

7 A. Well, my answer to that would be that,  
8 to the extent there are efficiencies because of the  
9 nature of the grain, these have been included in the  
10 cost study since we costed the actual movement of the  
11 grain and the actual experience resulting from this.  
12 I am not exactly sure what you mean by "efficiencies".  
13 If you mean heavier loading for grain, this has been  
14 reflected in the costs of crew wages and this type of ---

15 Q. I understand, for instance, that you  
16 could supplement manifest trains with additional grain  
17 cars and things of that sort?

18 A. Yes.

19 Q. Is this reducing your overall cost of  
20 operation of the system in the West?

21 A. No, I would say no to that question.  
22 It is not reducing it -- I am not exactly sure I  
23 understand the question, but if it is what I think it is,  
24 you are dealing with the problem of filling out all  
25 manifest trains with grain where the occasion arises.  
26 I would not say that this effected any economies that  
27 were peculiar to grain, no. We would just change the  
28 schedule for the trains.

29 Q. On page 6 of the precis, down at the  
30 bottom, you give some figures about the movement of





1 grain cars and tons to mills and government elevators.

2 Perhaps I can read this:

3 "Some 8,888 cars containing 467,132 tons, averaging

4 "52.6 tons per car, were inbound by rail to mills

5 "and government elevators. 14,430 cars containing

6 "495,740 tons, averaging 34.4 tons per car,

7 "were outbound to export grain terminals."

8  
9 Am I right in understanding that the difference  
10 in the outbound and inbound average tonnage per car is  
11 the result of the milling under the milling-in-transit  
12 privileges?

13 A. That is correct, yes.

14 Q. That is because the mill to train  
15 products are lighter loading?

16 A. Yes, that is correct. For each car in  
17 you get between  $1\frac{1}{2}$  and 2 cars out.

18 Q. And yet, that milled-in-transit grain  
19 moves at the same through rate?

20 A. That is correct.

21 Q. So, you have ---

22 A. With the addition that there is a stop-  
23 over charge collected on the milling-in-transit.

24 Q. Oh yes, I appreciate that, but the  
25 transportation charge itself, apart from the actual  
26 stopover charge, is the through rate?

27 A. That is right.

28 Q. And you are in a position, then, of  
29 hauling ex-mill almost two cars for each car hauled to  
30 the mill?





1  
2 A. That is correct.

3 Q. Could you give us some estimate of the  
4 extra car mileage that is involved in the movement  
5 ex-mill?

6 A. We have done a rough calculation on  
7 this as additional car miles would be -- that is  
8 approximately between  $3\frac{1}{2}$  and 4 per cent of our total  
9 car miles which I think is somewhere around 7 million  
10 car miles additional, because of the hauling of two  
11 cars out of the mill and one car in.

12 Q. And you don't get any additional revenues  
13 for that extra movement?

14 A. Not that I know of.

15 THE CHAIRMAN: Only the stopover.

16 MR. CUMMING: Q. Oh, apart from the  
17 stopover?

18 A. No, we don't get anything in addition to  
19 the stopover charges.

20 Q. Is a substantial amount of these milled-  
21 in-transit grain products destined for the Eastern  
22 Canadian domestic market?

23 A. I am informed that a substantial portion  
24 is. I would assume there was. However, there are  
25 flour, export, or what-not, and the exact proportion  
26 of this that is domestic in the sense that it is  
27 going to Eastern Canada and export, I don't know offhand.  
28 However, I would imagine a substantial proportion  
29 was coming to Eastern Canada for internal use in  
30 Eastern Canada.







1  
2 Q. What I am leading to is this: could it  
3 be suggested in the light of the fact that some, at  
4 least, of these milled-in-transit grain products are  
5 going to the Eastern Canadian domestic market as  
6 against overseas markets that, really, in the subsidy  
7 recommendations that the railways have advanced, there  
8 is an element of subsidy for the benefit of the  
9 consumers of bread in Eastern Canada?

10 A. Well, I suppose you could look at it  
11 in that fashion. The situation presently is that ---

12 THE CHAIRMAN: As against British  
13 Columbia in particular?

14 MR. CUMMING: Q. As compared to the situa-  
15 tion on the westbound movement?

16 A. I believe the position the railways have  
17 taken is that with the grain and grain products  
18 presently moving beneath costs -- variable and total --  
19 that there is an element of subsidy on the traffic  
20 moving at this: this subsidy at the moment being  
21 paid by both railways. Whether this is a subsidy to  
22 the people who ship the product or to the final  
23 consumers is a question that, frankly, I am unable to  
24 answer.

25 COMMISSIONER MANN: If there is an element  
26 of subsidy to the domestic consumer, that holds true  
27 for grain products, as you have said, but it also holds  
28 true for grain to the extent it goes to the domestic  
29 consumer in the east?

30 THE WITNESS: That is quite right, but





1 as we know, before you can determine whether it is a  
2 subsidy to the receiver or to the shipper, you would  
3 have to find out what would happen -- how an increase  
4 in rate would be passed on. Would it be added to the  
5 price charged to the receiver, or would it be sub-  
6 tracted from the receipts of the shipper? Before  
7 you can say that it is a subsidy to one or the other,  
8 you have to know the effect of that.  
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1 Q. Mr. Bandeem, I want to talk to you for  
2 a minute or two about empty movements. You have  
3 charged to the grain traffic the empty movement of box-  
4 cars prior to loading; that is on the basis of allo-  
5 cation of the cost of empty movement to this study  
6 traffic?

7 A. That is correct.

8 Q. I understand from what Dr. Edwards said  
9 in his evidence yesterday that you have done some fur-  
10 ther study of the post empty movement characteristics of  
11 this study traffic?

12 A. Yes, we have, and we have some results  
13 on that, if you would just give me a moment to find it.  
14 In the initial instance, when we were planning this  
15 study, we felt that we should use the prior empty  
16 movement on theoretical and conceptual grounds, but  
17 just to test the situation in western Canada we looked  
18 at both the prior and subsequent. This is for the  
19 sample of cars loaded with grain. We checked their  
20 movements previous to being loaded and after they were  
21 unloaded.

22 Q. That was the same sample that formed the  
23 basis ---

24 A. Exactly the same sample, and we found  
25 that the subsequent empty car days -- because this in-  
26 volves both days and car miles -- exceeded the prior by  
27 330,346, whereas the subsequent empty car miles exceeded  
28 the prior by some 8.37 million miles, and had we  
29 evaluated these and used subsequent rather than prior,  
30





1 it would have increased the variable cost by nearly  
2 \$900,000 and the constant cost by \$600,000. However,  
3 we are not suggesting that we should have used the  
4 subsequent, because we felt for other reasons that the  
5 prior was a better measure of the empty car miles  
6 associated with the movement, and the reason that we  
7 looked at subsequent was that we were concerned about  
8 such places as Vancouver and Prince Rupert where we  
9 felt there was a high reloading factor; but the effect  
10 of the lakehead and Churchill far over-balances the  
11 loading characteristics at Vancouver and Prince Rupert.  
12

13 Q. Can you explain why, so that we may have  
14 this clarified? What is there about this traffic  
15 that entails more empty movement after unloading than  
16 prior?

17 A. Well, in the case of Churchill, I realize  
18 that is not too large a movement, but there is very  
19 little boxcar traffic coming back from Churchill.

20 Q. What is the important movement?

21 A. The important movement, I think, is  
22 Scotch whisky to Regina.

23 Q. I would have thought that would be a  
24 volume movement.

25 A. I am afraid you are more familiar with  
26 the western drinking habits than I am. At the lakehead,  
27 where the great majority of our traffic goes, there is  
28 very little reloading of boxcars. Our cars are taken  
29 out of position by going to the lakehead, and they have  
30 to go back either to central Canada or to Winnipeg, at





1  
2 least, before there is any substantial volume of traffic.

3 Q. I appreciate you are not seeking to  
4 charge against the study traffic post empty movement,  
5 but is there any logical basis on which you, as a  
6 cost analyst, would be prepared to defend the charging  
7 of post as against prior movement?

8 A. This is a subject on which you can  
9 develop arguments that we can use either movement,  
10 either the prior or the subsequent movement, and both  
11 arguments have some degree of validity. However, we  
12 felt that prior movement was the one that gave a more  
13 accurate picture of the cost, and also, since the  
14 movement gave fewer car miles and car days, we felt  
15 this was another conservative measure to take in the  
16 costing of this grain.

17 Now, the argument, as you know, develops in  
18 the following fashion. In looking at a car or move-  
19 ment of grain or any commodity you have to consider  
20 whether the empty movement that occurred before was  
21 for that traffic; in other words, was the car sitting  
22 idle wherever it happened to be empty and it was  
23 assigned to the movement of grain, let us say. Do you  
24 charge that movement to the car or do you look at it  
25 in the other fashion, that the reason there is an empty  
26 movement is that the car is up in Churchill and this is  
27 not charged to the person who happens to move the  
28 car, whether in Churchill or Manitoba, and there are  
29 arguments in either direction. But we felt it best  
30 to take the prior movement on the basis that once the







1 car is unloaded you could not attribute any commodity  
2 to the movement where it was unloaded and the movement  
3 was because it was ordered to be loaded with grain.

4 COMMISSIONER BALCH: What was the prior  
5 movement involved?

6 THE WITNESS: This would be a movement from  
7 point of last unloading to the country elevator or to  
8 the mill.

9 COMMISSIONER BALCH: What about the prepara-  
10 tion of the car?

11 THE WITNESS: You mean cleaning?

12 COMMISSIONER BALCH: Cleaning, and so on.

13 THE WITNESS: I don't believe we charged any,  
14 not for cleaning. There would be for repairs. Oh,  
15 the time involved was charged.

16 COMMISSIONER BALCH: There is usually a  
17 great amount of extra switching preparing the car, taking  
18 it from one point in the yard to another point in the  
19 yard where it is cleaned. Is that included?

20 THE WITNESS: I don't believe it is.

21 COMMISSIONER BALCH: Especially in the larger  
22 terminals.

23 THE WITNESS: Well, especially for grain pro-  
24 ducts, where you have to have an "A" car. We didn't  
25 include any of the switching time because we didn't  
26 know which cars had this movement and which hadn't.  
27 It is not fair to say that all of them would get a  
28 cleaning; a large number of them wouldn't get a cleaning.  
29 But we left that out, and I suppose this is again an area  
30





1  
2 of conservatism. But whom do you charge the cleaning  
3 to? Is it cleaned because it is going to be loaded  
4 with grain products or because some person used another  
5 type of commodity in it previously?

6 COMMISSIONER BALCH: What I have found is  
7 that the shipper who shipped prior to that usually tries  
8 to unload everything he can into this car while he  
9 has got it, so that involves a lot of movement for that  
10 car. So you are really on the conservative side.

11 THE WITNESS: Yes, that is right. We didn't  
12 include any of that cost.

13 MR. CUMMING: Q. Would there be any prior  
14 empty movement charged to the study traffic if you  
15 had used the average empty movement in the western  
16 region?

17 A. No, we didn't have the average of empty  
18 movement for boxcars in the western region. This is  
19 not kept in the company records by type of car, and the  
20 only figure we have is the empty car miles for all  
21 types of equipment.

22 Q. That would include tank cars, refrigerators,  
23 gondolas?

24 A. Yes, hoppers, and the figure for the  
25 western region in the Canadian National was 55 plus.  
26 One moment and I will find the actual figure for you.  
27 The figure for all cars in the western region was 55.6  
28 per cent empty car miles to loaded car miles, and that  
29 included all types of cars. Through our study we  
30 found that the cars which moved grain, the ratio of







1 empty car miles to loaded car miles, was 57.3 per cent,  
2 so you have a difference of 1.7 per cent, which would  
3 not be terribly large if we had just used the western  
4 region average.

5  
6 Q. That compares against the system average  
7 on Canadian National of 50.7 per cent?

8 A. That reflects the lower empty movement  
9 in eastern Canada, I would imagine.

10 Q. In your internal costing you have been  
11 talking about on the sort of day-to-day basis, when  
12 the Traffic Departments seeks a rate from you, what  
13 do you do with the empty movement?

14 A. Well, depending on the necessity for  
15 refinement in the cost and the urgency thereon, we use  
16 a percentage empty to loaded at interchange points,  
17 which would be more or less on a division basis. But  
18 if it is something that is a large movement, and where  
19 it is important that we get a precise measure of the  
20 cost, we will go to tracing cars in the same fashion  
21 we have done here. Now, it is not easy to trace cars  
22 the way the record is kept, it is time-consuming and  
23 takes a fairly large staff. We are hopeful in the  
24 near future to have our data in such form that by  
25 mechanization we will be able to get these empty car  
26 tracings much easier than we can today. But at the  
27 moment we have to send a group of clerks to trace  
28 the empty car movement.

29 Q. If you do not go to the extent necessary  
30 of field studies or detailed studies required for an





1 actual tracing, is the method you use the same as the  
2 ICC method which Mr. Stenason described to us?

3 A. I have to confess I am not familiar with  
4 the ICC method, but I believe they use territorial  
5 averages, and ours is similar to theirs in some respects  
6 except that we use smaller territories and, by and  
7 large, we will know the empty movement if it is, say,  
8 a stub-in branch line or a movement on Hudson Bay  
9 railway; we know the actual movement on that line  
10 from data we already have. I must hasten to say here  
11 that we would be using an average for all types of cars  
12 and not just boxcars, unless we know the actual type of  
13 movements which would lead us to use other methods.

14 Q. On a specialized line or something of  
15 that sort?

16 A. That is right.

17 Q. When we were talking about this milling  
18 in transit business you pointed out that the movement  
19 ex-mill requires almost two cars for every one inbound  
20 car?

21 A. That is correct.

22 Q. In developing the car cycle that you  
23 calculated and used as part of the basis of this cost  
24 study, was the prior empty movement of the additional  
25 cars called into the mills to handle the increased  
26 volume outbound included?

27 A. Well, in the initial instance we had  
28 made an error in calculating the empty car miles and  
29 empty car days associated with the milling in transit  
30





1 traffic. However, we have since made the correction,  
2 and I believe we put it in in December, although  
3 wait till I check. I am sorry, we did not make a  
4 correction because it shows that the change would be  
5 less than one-fiftieth of one per cent of the total  
6 car days in the study, and it would be an increase, so  
7 we again left this out. But in the initial instance  
8 we applied the same car cycle to milling in transit  
9 traffic at the terminal as we did to grain at the  
10 terminal, and that, of course, is not justified. But  
11 in rechecking we found that the change in car miles  
12 and car days would be so small it would not necessarily  
13 be a correction.  
14

15  
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17  
18 (Page 13176 follows)  
19  
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30







1 Q. Now on the matter of non-revenue freight,  
2 O.C.S. movements, you have charged grain traffic with  
3 a percentage factor for the cost of moving on-company-  
4 service freight on a ratio of non-revenue freight ton-  
5 miles to total revenue freight ton-miles, that is  
6 my understanding of the method by which you adjusted  
7 the basic output units.

8 A. Yes, after separating out the passenger  
9 portion of it, yes.

10 Q. And you did it on the basis of the  
11 system average, did you, or did you use the Western  
12 region average?

13 A. No, we used the Western region average.

14 Q. Are you satisfied that that is a correct  
15 reflection of the cost of that movement?

16 A. Actually we should have used more than  
17 the Western region average. This came up later after  
18 we had done the study, and we were working on another  
19 study in the Western region, and we found out that  
20 the Western region average did not include the move-  
21 ments of O.C.S. material, say, from Eastern Canada to  
22 the West. Now, this would involve steel, rails and  
23 other products.

24 So we went back and re-calculated the ton-  
25 miles to get the actual per cent of O.C.S. ton-  
26 miles that were used in the Western region where  
27 the final products of these were used in the Western  
28 region. It would have increased our per cent from  
29 4.445 per cent to 5.32 per cent, and this would have  
30





1 had the effect on our part of increasing the variable  
2 cost by some \$300,000 and a constant cost by \$200,000, or  
3 a total of half a million dollars.  
4

5 Now, Dr. Edwards put this in yesterday and  
6 listed it as an area of conservatism on the part of  
7 the Canadian National.

8 Q. Just one more point in connection with  
9 switching, Mr. Bandeem. I would like you to look  
10 at this statement NR2-6 which shows the details of your  
11 traffic studies at the Lakehead. I am referring  
12 particularly to page 3 of 28. Have you got that page?

13 A. Yes, I have.

14 Q. Under the heading of "Industrial Switching"  
15 there is a sub-heading of "Elevators".

16 A. That is correct.

17 Q. Then you show the switch engine  
18 minutes and number of cars, minutes per car. Does  
19 this method of calculating the switch engine minutes  
20 that are involved take into account the size of  
21 cuts?

22 A. Yes, it would reflect the size of cuts  
23 as found in the study period for the switching into the  
24 elevators.

25 Q. Similarly there is another sub-heading  
26 "Other Industrial" with a whole series of movements  
27 described, some of which entail fairly substantial  
28 numbers of minutes per car in the switching movement  
29 involved. Are any of those averages included in the  
30 switching minutes attributable to the grain study?







1           A.   Well, three of them are included in the  
2 grain study.   Those would be the switching to Robin  
3 Hood Flour dock, five minutes per car. I understand  
4 that is a terminating area for some of our grain  
5 products.   Similarly, Mission (GTP) freight shed  
6 on page 3, is also a terminal area for some of the  
7 grain products; and on the next page, page 4, we have  
8 "Freight Shed and Docks -- Port Arthur" and that is a  
9 terminal for some of the grain products. But the  
10 other areas listed under "Other Industrial Switching"  
11 were not included in the grain study, and they are  
12 listed here only because when we were doing the study  
13 we had to take account of 100 per cent of the minutes  
14 spent by the switch engines, and we listed this because  
15 we intend using these studies for other than the  
16 grain costing study. In other words, in the future,  
17 if we have to cost a movement going into Lakehead,  
18 we will learn the switch minutes found for these other indus  
19 trial locations in doing our cost study, but they  
20 have nothing to do with grain and grain products.

21           Q.   What bothers me is that they all  
22 appeared under the heading "Industrial Switching" and  
23 the switching movements which were obviously grain  
24 were grouped under that same heading with other  
25 switching movements which were obviously not grain;  
26 and I was concerned to know whether or not there was  
27 any of that obviously non-grain time had found its  
28 way into the overall averages used.

29           A.   No, it had none. This was just a  
30





1 complete reporting of the study as carried out.

2 Q. Now, on page 25 of your brief --

3 A. Incidentally, before we leave this point,  
4 if you would look at the remaining pages of that  
5 exhibit, from page 5 to 28, you will find the various  
6 combinations of switching elements that we had used  
7 in the study. If anyone is interested in studying  
8 them they are all outlined there, and the various  
9 movements, and by careful study of those you would see  
10 that none of the other industrial minutes enter into  
11 any of the possible combinations of moves.

12 COMMISSIONER BALCH: Mr. Cumming, before you  
13 leave that, this has been on my mind too, Mr. Bandeem.  
14 You mentioned that the winter difference in switching  
15 was 7 to 28 per cent. The C.P.R., I believe, allowed  
16 15 per cent, am I right on that?

17 THE WITNESS: I believe you are right,  
18 C.P.R. allowed 15 per cent for, I think it was, only  
19 four months, but Mr. Stenason ---

20 MR. STENASON: Yes, we found 15 per cent in  
21 the winter as compared with the summer, but the adjust-  
22 ment was 5 per cent to reflect the period of the year.

23 COMMISSIONER BALCH: I see. Then was  
24 7 to 28 just a guess?

25 THE WITNESS: No, what we did, we took either  
26 four or five of the principal terminals in Western  
27 regions, and we took average cars per engine hour by the  
28 winter, and the average cars per engine hour in the  
29 summer and compared them, and found that in the summer  
30





1 you got an increase in the number of cars per engine  
2 hour from 7 per cent to 28 per cent. This would  
3 reflect a number of things.

4 COMMISSIONER BALCH: There was a certain  
5 test made then.

6 THE WITNESS: Yes, we did not feel we had  
7 sufficient data at hand to come up with one figure.

8 COMMISSIONER BALCH: I did not want the  
9 idea to be given that it was guesswork. There was a  
10 certain amount of tests made.

11 THE WITNESS: Oh, yes.

12 MR. CUMMING: Q. I take it that this ques-  
13 tion of size of cuts which you have told us is accounted  
14 for in the averages in the movements that are described  
15 there, may, from what Dr. Edwards says, be still a  
16 factor in classification switching?

17 A. It could very conceivably be a factor  
18 in classification switching. However, we feel that  
19 it would be a very small factor.

20 Now, knowing the importance that has been  
21 attached to this by certain of the gentlemen who were  
22 questioning Mr. Stenason and Dr. Edwards, I have  
23 prepared a very short memorandum of our position in  
24 the Canadian National on size of cuts, which it may be  
25 of benefit if I could read into the record.

26 Q. If you would, please, Mr. Bandeem.

27 Reference has been made to the matter of  
28 "size of cut" on a number of occasions and I would like  
29 to preface my answer with a few general remarks  
30







1  
2 designed to clarify the manner in which it has been  
3 treated in our study and the implications of the ques-  
4 tion that has been raised in respect to the relative size  
5 of grain cuts.

6 To place the matter in perspective, it should  
7 first be pointed out that the discussion may properly  
8 be related to only one of the elements of switching  
9 service, that of "classification switching". The  
10 switching service accorded grain traffic falls into  
11 four broad groupings; the switching of cars to and  
12 from loading and unloading points at originating,  
13 milling and destination stations; transfer movements from  
14 the main classification areas to other yards or mills and  
15 elevators; movement, where applicable, to and from car  
16 repair facilities; and what has been referred to as  
17 "classification switching".

18 For each of the first three categories of  
19 service, weighting for the relative size of cut was  
20 inherent in the study methods. For each such service  
21 and for each loading and unloading point, the minutes  
22 per car were derived by dividing the number of cars  
23 into the switch engine time required to perform that  
24 particular element of work and thus reflected the  
25 individual size of the cuts actually being handled.

26 The present discussion may be confined,  
27 therefore, to the category of "classification switching",  
28 which is the switching performed in main yard areas to  
29 line-up traffic for through or local handling. The  
30 study method in dealing with this element of service





1  
2 was to divide switch engine time applicable by the  
3 total number of cars as determined by an actual count of  
4 the cars entering the classification area.. The effect  
5 of this approach was to assume that all traffic was  
6 handled in cuts of the same average size.

7 The question that has now been raised is  
8 whether there are terminals at which grain traffic is  
9 handled in cuts larger than the average for all  
10 traffic and, if so, whether this might be reflected in  
11 lower switching costs attributable to this particular  
12 segment of traffic.

13 This matter was brought out and given some  
14 considerable thought during the preliminary planning  
15 for the field switching studies. The results of our  
16 analysis indicated first, that variations in switching  
17 costs relative to size of cut would be impossible of accurate  
18 measurement and second, that the effect on the switching  
19 minutes attributed to grain traffic would not be  
20 significant.

21 The problem of the possible effect of relative  
22 size of grain cuts was referred to the office of the  
23 System Supervisor of Terminal Operations, Montreal,  
24 which exercises control over all terminal operations.  
25 Their assessment was that it would be only where  
26 grain was moved in substantial volumes through a flat  
27 switching facility in conjunction with a large volume  
28 of non-grain traffic that there might be any effect.  
29 Such conditions would not obtain at smaller gathering  
30 terminals or at terminals where grain was the principal







1  
2 movement, at which the average number of cars per cut  
3 would be simply a reflection of the average size of  
4 the grain cuts. It was the opinion of this office that  
5 there was only one terminal on the Western Region,  
6 that at Winnipeg, where the traffic pattern might be  
7 such as to warrant differentiation between grain and  
8 total traffic.

9           While there are no such records maintained,  
10 further analysis suggested that the difference in the  
11 relative size of cut at Winnipeg would be small in  
12 absolute terms, since non-grain traffic tends also to  
13 move in cuts reflecting advance marshalling and bulk  
14 commodity movements. A special check of the records at  
15 Fort Rouge yard covering a one-week period during May,  
16 1958, indicated 15% of the non-grain traffic was handled  
17 in cuts of 11 cars and over and that a total of 67%  
18 of the traffic was in cuts of two cars or more rep-  
19 resenting multiple car movements of stock, paper,  
20 lumber, oil, metal, coal and other traffic blocked for  
21 through handling. These results were supplemented by  
22 figures developed by the System Supervisor of Terminal  
23 Planning from a special survey of the Winnipeg yard  
24 made in 1955 which showed the average number of cars  
25 per cut for all traffic to be 2.7 compared with an  
26 average of 4.2 cars for grain traffic only. While  
27 these figures again represented only one week's experience,  
28 they served to confirm that the margin of difference  
29 between the average size of cuts for all traffic and for  
30 grain would not be large in terms of number of cars.





1  
2 Although there was no data available, it  
3 appeared evident that the variations in switching cost  
4 per car which might accrue from an increase in the  
5 average size of cut of this order, from say 2.7 to 4.2  
6 cars, would in turn be relatively small.

7 Since any such differences as might appear  
8 would also be confined to "classification switching",  
9 our analysis appeared to leave no doubt that the  
10 relative size of cut would have a very limited effect  
11 on the switching minutes attributed to grain in the  
12 over-all picture.

13 We foresaw also certain practical problems in  
14 conducting studies designed to take the element of size  
15 of cut into account, including the problem of resolving  
16 differences between the theoretical number of cuts as  
17 indicated by the traffic destination on the incoming  
18 train consist, and the actual number of cuts made by  
19 the switch crews, which are determined in part by the  
20 length of the load and the <sup>\*\*</sup>position of bad order cars  
21 in the train. Added to this was the problem that the  
22 results obtained from such an approach would have to be  
23 interpreted through a figure representing the average  
24 number of cars per cut for grain distinct from other  
25 traffic -- a measure which would lack preciseness with  
26 the variations attendant to changing volumes of grain  
27 traffic over the year.

28 While these problems could have been met, it  
29 would have meant additional effort on an already extensive  
30 study project planned to include a survey of nearly a







1  
2 thousand switch engine assignments. In light of our  
3 other findings, therefore, the decision was reached  
4 to conduct the studies on the basis of the average  
5 size of cut for all traffic.

6 While satisfied that the relative size of cut  
7 would have had no significant effect on the switching  
8 effort which has been attributed to grain, we have no  
9 data from which an empirical measure might be developed.  
10 The only material that I have seen on the subject of  
11 effect of size of cut on switching costs is that  
12 prepared by Mr. Wright in his article in the publica-  
13 tion "Railway Age". Without comparable data and  
14 without additional detail as to the assumptions made,  
15 there is no means of appraising the results obtained by  
16 Mr. Wright. From what information has been provided,  
17 there would appear to be certain limitations and I  
18 would not be in a position to endorse the method of  
19 approach.

20 If the validity of Mr. Wright's figures were  
21 to be assumed, however, a figure could be developed --  
22 although it would be nothing more than an approximation  
23 of magnitude. On the basis of the relative values  
24 calculated by Mr. Wright ---

25 I want to enter here that I am not endorsing  
26 Mr. Wright's article because I think it has some  
27 serious drawbacks in it, but if we accept Mr.  
28 Wright's figures --- On the basis of the relative  
29 values calculated by Mr. Wright and the figures  
30 obtained from the Winnipeg study -- i.e. an average of







1 2.7 cars per cut for all traffic and 4.2 cars per cut  
2 for grain traffic -- the effect of relative size of cut  
3 would have been to reduce the classification switching  
4 attributed to grain at Winnipeg by about .38 minutes  
5 per car. Applied to the total car handlings this  
6 would yield a figure of approximately 31,000 switch  
7 engine minutes or slightly over 7% of the total minutes  
8 of classification switching attributed to the handling  
9 of the through grain traffic at Winnipeg.  
10

11 Since in our assessment Winnipeg is the only  
12 terminal at which those circumstances could obtain,  
13 this figure, if accepted, would represent the maximum  
14 potential area of adjustment over the total of some 5.6  
15 million minutes of engine time attributed to the  
16 handling of the study traffic. The equivalent dollar  
17 value would be slightly less than \$30 thousand.

18 So accordingly we have not included anything  
19 to reflect the size of cut, because on the overall  
20 study, even if we accept Mr. Wright's figures -- which  
21 we do not -- but if we use them without necessarily  
22 endorsing them, we only get a reduction of \$30 thousand  
23 on the total cost of the grain.

24 Q. Thank you, Mr. Bandeem. If I may say  
25 so, that was quite an answer to one short question.  
26 On page 25 you say, dealing with the analysis of the  
27 railway primary expense accounts

28 "The expense data were then all stated in

29 "December 1958 wages and material prices by

30 "adjusting for changes in wages and in the





1 "Canadian National material price index."

2 When I was discussing these matters with Dr. Edwards  
3 yesterday, he included, without putting a number on it,  
4 so far as Canadian National was concerned, as one of  
5 the elements of the conservatism, the fact that this  
6 study had not been adjusted upwards to present levels.  
7 Can you give us some idea of the order of additional  
8 cost that would be entailed as the result of the wage  
9 increases that have taken effect since the conclusion  
10 of the cost study?  
11

12 A. I am sorry, I cannot. There have  
13 been wage increases. I forget the magnitude of them.  
14  
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1  
2 Q. The note I had was that there came into  
3 effect something like nine or nine and a half in  
4 running trades and it was either three or three and a  
5 half in the non- operating.

6 A. No; the non-operating increases would  
7 apply equally well to Canadian National; the running  
8 trades increases may not.

9 I believe we negotiated separately, but I am  
10 not sure.

11 I am informed that there is a different day  
12 when the increases take place, but they are essentially  
13 of the same magnitude.

14 Q. In dealing with increased costs of that  
15 sort would there be offsetting increases of productivity  
16 per man hour, or however it may be measured, during that  
17 time that would, to some extent, reduce the impact of  
18 wage increases?

19 A. Well, it is possible that there would have  
20 been, and one of them would have been resulting from the  
21 full dieselization, and I understand from the press  
22 that Canadian National is the first major railway in  
23 Canada to be fully dieselized, and that occurred as of  
24 the day before yesterday, I believe.

25 MR. SINCLAIR: Last week.

26 THE WITNESS: I believe that would increase  
27 the efficiency. But as I understand it we costed our  
28 study as if it was fully dieselized, to take into  
29 account any of the increased efficiencies occurring from  
30 full dieselization.





1 MR. CUMMING: Q. I suppose extension of  
2 what has been called CTC would be another area in which  
3 increased efficiency could reduce costs?  
4

5 A. That is correct.

6 Q. Now, you said a moment ago that your  
7 study was based on assuming complete dieselization.  
8 Generally, in the manner in which it was done, it is  
9 what is described as a purely cross-section analysis?  
10 Is that the proper description of the kind of study  
11 that was made?

12 A. Where regression takes place, yes; and,  
13 as I explained earlier, for maintenance of way primarily,  
14 with some transportation.

15 Q. But in assuming a complete dieselization  
16 the way, perhaps, in which you did it was to take the  
17 diesel fleet as being rather more mature than it  
18 actually is?

19 A. Yes, that is correct.

20 Q. You have introduced an element of fore-  
21 cast into your cost study, have you not?

22 A. Yes, we have. We explained that when  
23 we first submitted our study to the Commission, that  
24 we had used the fully dieselized basis and we had  
25 adjusted the maintenance cost of diesels to reflect  
26 what might occur in the future. I can't tell you  
27 whether that actually will occur or not.

28 What we did was to take from our own internal  
29 diesel experience the diesels aged between three and  
30 ten years, I believe, and took the average of these to





1 be the experience that we could expect in the future  
2 when we were fully dieselized and had a mature diesel  
3 fleet.

4 I think we may still be understainging our  
5 diesel maintenance because in conversation with some  
6 American railway officials I am led to believe that  
7 after the tenth year diesel expenditure again increases  
8 rather substantially; but we don't just have the ex-  
9 perience to validate that.

10 Q. If the study that is recommended and the  
11 basis upon which it is proposed would be recalculated  
12 each year is there any danger that by using that fore-  
13 cast that you have used there may be some overstatement  
14 of cost?

15 A. Well, I don't feel that it is an over-  
16 statement of cost and that there would be any of that  
17 danger. However, since what we have used is the  
18 average of diesels three years and over we will be in  
19 the situation in -- well, I guess three years from last  
20 week -- of having the majority of our fleet three years  
21 and over, and if there is any understatement or over-  
22 statement, it certainly can't last longer than three  
23 years; and, frankly, I don't think it is an overstate-  
24 ment.

25 Q. Are there any other offsetting factors  
26 with the elimination of steam costs, which, perhaps,  
27 offset any overstatement that there is?

28 A. One of the difficulties, as you know, in  
29 trying to cost a movement that is partially moved by  
30







1 steam and partially moved by diesel -- particularly when  
2 you are slowing the element of steam down -- is that  
3 you don't have accurate costs, or proper costs on the  
4 steam repairs. You generally attempt to run as much  
5 life out of them as you can before you get rid of them.  
6

7 Q. Without doing heavy repairs?

8 A. Yes; so that the reason we chose not to  
9 put steam in any proportion is that we had no estimate  
10 of what the costs would be, that we considered realistic.

11 Now, I am aware that Canadian Pacific put in  
12 some steam and diesel bases and they used the actual  
13 expenditure in 1958. I feel they have understated it  
14 on the cost of moving grain. I believe Dr. Edwards  
15 introduced that yesterday in dealing with the area of  
16 conservatism.

17 Q. And that is because, as I understand it,  
18 the steam fleet is not getting the same level of  
19 repair that it would otherwise get if it was going to be  
20 continued in operation?

21 A. Yes; and I don't know when Canadian  
22 Pacific is going to be fully dieselized; but in our own  
23 particular case I was quite certain that we would be  
24 fully dieselized before the hearings of this Commission  
25 were over.

26 MR. CUMMING: We will trust that your diesel  
27 fleet won't be fully matured!

28 COMMISSIONER ANSCOMB: How do you fix depre-  
29 ciation on a diesel car?

30 THE WITNESS: I will have to check the





1 depreciation rate. It is 20 years for road and 25  
2 for yard, I believe. You see, we are anticipating an  
3 average age of ten years a diesel. If the average  
4 diesel will last for twenty years then, when we are  
5 fully dieselized and you have a mature fleet it would  
6 be an average of ten years old. Our average at the  
7 moment is 2.3 years, or, at least, it was that when we  
8 did the study; I presume it would be around three years  
9 now.

10  
11 COMMISSIONER BALCH: And what about the cost  
12 of repairs?

13 THE WITNESS: The cost of repairs is going  
14 to be very drastic in the first three years. It goes  
15 up and levels off after the third. From three years  
16 to the tenth year there is a slight rise, but it is not  
17 significant; and I understand, although we don't have  
18 experience on the Canadian National, from talking to  
19 some of the cost people in the United States that the  
20 costs then go up again after the tenth year -- go up  
21 drastically. But we didn't have experience internally  
22 and we made no allowance for what might happen. When  
23 we took the average age of the diesel from three to  
24 seven years the average age of them was five years. Of  
25 course, it still reflects that there are a lot that are  
26 four or five years old.

27 MR. CUMMING: Q. I want to turn to just one  
28 small point in connection with solely relatedness.

29 On page 35, Mr. Bandeem, in the second para-  
30 graph, under the heading "Maintenance costs variable







1 with the cost of solely related plant," and about the  
2 fourth line:

3 "For each subdivision the cost of handling  
4 the traffic while not on the subdivision was  
5 taken at 50 per cent of the revenues for such  
6 traffic. Thus 50 per cent of the revenue is  
7 credited to the subdivision alone."

8 What is the basis for the assumption that the cost of  
9 revenue should be divided between subdivision and main  
10 line on that 50 per cent basis?

11 A. This is the procedure that is followed in  
12 cases before the Board of Transport Commissioners in  
13 abandonment procedure.

14 Q. Is it just a rule-of-thumb, or does it  
15 have some real validity?

16 A. It has some degree of validity.  
17 Initially it was based on studies. However, if I re-  
18 member correctly Mr. Stenason in his evidence stated  
19 that they tested the validity of this assumption and  
20 found it to be satisfactory; and he has already stated  
21 that in his evidence. They had some additional infor-  
22 mation on these western region branch lines of the  
23 Canadian Pacific which we didn't have in the Canadian  
24 National and they tested out the assumption of  
25 50 per cent and found it to be satisfactory.

26 Q. Are you conducting any present studies  
27 into this?

28 A. Yes, we are; and we are doing costing on  
29 car movements of all branch line operations in the western  
30





1 region at the present moment.

2  
3 Q. On the question of branch lines, do you  
4 think that the Canadian National could improve its  
5 position to a measurable extent by abandoning a  
6 substantial portion of its solely-related lines? There  
7 are a lot of vague terms in that, Mr. Bandeem.

8 A. Yes. This depends on the rate we are  
9 going to get for statutory grain. If the Commission  
10 rule we should get  $2\frac{1}{2}$  cents a ton mile we could keep a  
11 lot of them going and in a healthy condition, but if  
12 the rule is that we were to retain the present half cent  
13 a ton mile there are several of the lines that would  
14 definitely become candidates for abandonment.

15 As a matter of fact, at the moment we are  
16 trying to abandon, I believe it is, three in the pro-  
17 vince of Manitoba, and it is before the Board at the  
18 moment, waiting for their decision.

19 THE CHAIRMAN: What is the average maintenance  
20 cost per mile on these branch lines per year?

21 THE WITNESS: I would have to go and do a . . .

22 THE CHAIRMAN: Just a rough estimate.

23 THE WITNESS: Well, I would say, just as a  
24 rule-of-thumb, about \$2,000 per mile of track. That  
25 is very rough. It depends on the volume over it as  
26 well as the actual maintenance of track.

27 As I understand from our regression analysis,  
28 what we attempted to do was to find a basic expenditure,  
29 I believe the term "irreducible minimum expenditure"  
30 has been bandied about a considerable amount, but what





1 we were trying to find was expenditure per mile of  
2 track which was there just because the track was  
3 also there, and then we tried to get a measurement  
4 that would reflect the increase in this maintenance  
5 which would occur from increase in volume. And when  
6 you say "What is the average for all of these lines?"  
7 I would have to know what the volume was for the line.  
8 But I would think that the \$2,000 per mile of track is  
9 probably a fairly good estimate. I don't know whether  
10 they included overhead. . . . No, that would just  
11 be the variation in the maintenance cost on the actual  
12 branch line.  
13

14 MR. CUMMING: Q. As I recall Mr. Stenason's  
15 evidence, Mr. Bandeem, he indicated in answer to a  
16 question which the Chairman had asked him that if the  
17 railways were to receive a revenue of one cent a ton mile  
18 as they suggest they should for the movement of grain to  
19 export positions about three or four of the branch lines  
20 on Canadian Pacific would be profitable -- and there has  
21 been an exhibit introduced today dealing with that because  
22 I had asked some further questions on it.

23 Is Canadian National in about the same posi-  
24 tion?

25 A. We haven't studied it to that extent and  
26 come back and repriced the grain movement.

27 I would say, offhand, that we wouldn't be in  
28 the same position. I would think we would have more of  
29 these lines which would still be uneconomic even at one  
30 cent; and I think this would be reflected -- it has been







1 reflected -- in our request for abandonment in the  
2 western region; and we certainly would never . . .

3 THE CHAIRMAN: Can you identify these branch  
4 lines now?

5 THE WITNESS: Not at the moment.

6 MR. CUMMING: Q. So that with some further  
7 study you could develop the sort of information that is  
8 set out in Exhibit 144?

9 A. Yes, we could identify them in the same  
10 fashion as the C.P.R. has them.

11 Is that a request for information?

12 MR. CUMMING: Yes.

13 Mr. Chairman, I just have one more matter to  
14 deal with. Perhaps we could deal with that. It is  
15 in connection with the application of constant costs.

16 THE CHAIRMAN: Yes.

17 MR. CUMMING: Q. Constant costs have been  
18 allocated to the study traffic on the basis of ratio  
19 of the variable expense to the study traffic to  
20 variable system freight expense?

21 A. Yes.

22 Q. I wonder if you could tell us just what  
23 are the criteria by which a method of allocating constant  
24 cost is charged?

25 A. Well, I believe Dr. Edwards has already  
26 on the record stated that there are several methods  
27 that have been used in the past for allocating constant  
28 cost.

29 The ICC, as I understand it, previously used  
30





1 the method that we have in our studies, but gave this  
2 up in favour of a ton-and-ton mile apportionment which  
3 they felt was a better apportionment -- at least, I  
4 assume that they thought it was a better apportionment.  
5

6 Q. Did you consider using this method in  
7 your cost study?

8 A. We did not in the Canadian National  
9 consider using that method in this cost study.

10 Q. Did you consider using any method other  
11 than the one you ultimately chose?

12 A. Well, I think that earlier you were  
13 asking me the use of total cost as stated by Canadian  
14 National Railways, and I think I indicated to you that  
15 we didn't normally use this procedure internally; and  
16 the only reason that we had put forward a total cost  
17 in this study was because we realized the significance  
18 that is attached to it by people outside of the  
19 railways, or outside of Canadian National Railways;  
20 and that we put it forward for whatever use the  
21 individual evaluating the study wanted to make of it.  
22 In so doing we accepted this method partially, if  
23 not mainly, because it gave the lowest allocation  
24 of total cost to grain.

25 As Dr. Edwards explained to us yesterday, by  
26 using the per cent of variable cost method of distri-  
27 bution of constant cost you give heavy-loading com-  
28 modities a lower proportion of the constant cost than  
29 I felt was justified and, I believe, the ICC felt was  
30 justified. However, in our effort not to overstate, or







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appear to be misleading, we selected the method that  
gave the lowest constant cost apportionment.





1 Q. The other method -- that is, the ICC  
2 method -- it might be suggested would penalize the  
3 heavy loading?

4 A. I have no idea. I believe the reason  
5 they switched from the per cent of variable cost to  
6 the ton and ton-mile basis was because they felt it  
7 gave a better and more accurate statement of the  
8 constant cost. If this was so, they would not feel  
9 that this penalized the heavy loaders. What they  
10 felt before was that the heavy loaders were getting a  
11 free load at the expense of the light loading traffic.  
12 This, I believe, was the basis for their change in  
13 method. I would not say the ICC method would penalize  
14 grain. I would say the method we have used now penalizes  
15 the light loading commodity.

16 Q. On the other hand, I suppose there  
17 could be some justification for a weighting of the  
18 distribution of constant cost as against light loading  
19 on the ground that, generally, light loading traffic  
20 is the more valuable. Would that support it?

21 A. That is a generalization I would want to  
22 study. It is possible, but I think -- and Dr. Edwards  
23 can correct me on this -- I think the feeling was that  
24 this ton and ton-mile reflected more accurately the  
25 volume of work connected with the particular movement,  
26 and there was not a consideration of the value of the  
27 commodity being moved. Although, I don't know,  
28 frankly.

29 MR. CUMMING: That concludes what I have,  
30





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Mr. Chairman.

THE CHAIRMAN: We will adjourn now until  
two o'clock.

---Luncheon Adjournment.







1 ---On resuming at 2.00 p.m.

2  
3 THE CHAIRMAN: Order, please. Mr. Mauro?

4 MR. MAURO: Thank you, sir.

5  
6 CROSS-EXAMINATION BY MR. MAURO:

7 Q. Mr. Bandeem, from your evidence it would  
8 appear that your study was prepared on the basis of  
9 separate subdivisions; is that correct? The  
10 information was collected initially on the subdivision  
11 level.

12 A. That is correct, most of the information.  
13 Some of the data on crews' wages comes on a grain run  
14 basis, which doesn't necessarily coincide with the  
15 subdivision.

16 Q. I would assume, therefore, Mr. Bandeem,  
17 that you have the data on the cost of moving grain from  
18 Winnipeg to Fort William and the cost of moving grain  
19 from Calgary to Vancouver.

20 A. I have never separated it in that fashion.  
21 We would have very little cost from Calgary to  
22 Vancouver.

23 Q. Or Prince Rupert?

24 A. I think Edmonton to Vancouver would be  
25 more correct. What we did initially was to try to  
26 find the number of cars loaded by subdivision and  
27 then the ton-miles, the ton-miles and the gross car-  
28 miles by subdivision, and then we added it to the whole  
29 of the Western region, and it was after that that we  
30 priced it. So in order to give you the cost between





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Winnipeg and Fort William, we would have to go back and group those subdivisions and price them.

Q. In your intensive investigation into the costing of the grain movement, would you tell the Commission, comparatively speaking, the cost of movement from Winnipeg to Fort William as opposed to movement to the West Coast?

A. You mean was there a higher cost?

Q. Yes, for moving grain to the West Coast than to Fort William.

A. Well, there would be a higher cost with train crews and possibly fuel going to the west.

Q. Now, you agree, then, that there is no apparent reason, outside of the extra distance, that you would have additional car-days. I know the car cycle is longer to Fort William, but the average haul is longer also. Your Exhibit 57Y under car cycle days is considerable to the Lakehead, 24 days; Vancouver 39, direct and milled in transit; to the Lakehead 25 days and to Vancouver 40 days.

A. If I could find the average haul for you at those two places. Offhand, it is about 800 miles to the Lakehead and over a thousand to Vancouver, but I think we have the actual figures.

Q. Are you suggesting that 200 more miles or 300 more miles account for the increase in the car cycle days, an increase from 24 days to 39 days?

A. I am afraid I would have to study the way it has occurred, whether it occurred at the country







1 origin and the empty car miles or days. It might be  
2 more at the unloading at Vancouver. I don't know,  
3 frankly, where it occurred. What you are interested  
4 in is the in transit time loaded.  
5

6 Q. I am interested in any additional cost  
7 factors involved in moving grain to the West Coast  
8 as opposed to the movement of grain to Fort William.

9 A. I have the average haul figures.  
10 To the Lakehead it is 824 miles, to Vancouver it is  
11 1,021 miles, to Victoria it is 1,110 miles, to Prince  
12 Rupert it is 1,044 miles.

13 Q. So approximately 200 miles, additional  
14 mileage?

15 A. Yes.

16 Q. Now, I asked this question of Mr.  
17 Stenason and also Dr. Edwards, this matter of grain  
18 moving in train loads. You recall the quotation I  
19 read in from the evidence of Mr. Arkle that grain  
20 moving from Winnipeg to Fort William moves virtually --  
21 not completely in solid train loads but virtually in  
22 solid train loads. I wonder if you could tell us the  
23 experience of the C.N.R.

24 A. I think we would be in full agreement  
25 with that statement. As I mentioned already this  
26 morning, we have a different set-up than Canadian  
27 Pacific, and where the Canadian Pacific main line is  
28 going east through the Lakehead, ours is not. Move-  
29 ments from Winnipeg going east go along the north line  
30 and take the cut-off at Nakina. So the movement to the





1 Lakehead is traffic that is largely terminated at the  
2 Lakehead, and I understand 80 per cent of the grain is --  
3 this doesn't mean that they are all grain, there could  
4 be a carload of something else there, but 80 per cent  
5 of it is grain, and to a large extent some of our  
6 manifest trains -- one of them is largely grain.  
7 But if you take 80 per cent of the grain moving in  
8 solid trains, you would be fairly close. This is  
9 from Winnipeg to the Lakehead?  
10

11 Q. Yes. So that Mr. Stenason disagrees  
12 with the statement of Mr. Arkle, but you would tend  
13 to corroborate that in the C.NRR. they are virtually  
14 in solid train loads.

15 A. Yes. Ours is not the main line going  
16 east.

17 Q. So it is not 100 cars out of 100, but  
18 virtually it is.

19 A. Yes; there could be odd cars in there.

20 Q. At page 2198, Mr. Bandeem, of the  
21 transcript, Volume 16, you were discussing this  
22 matter of the fact that you used a fully-dieselized  
23 operation. The actual statement is:

24 "We have used a fully-dieselized operation,  
25 "and the way freight service was used only  
26 "to check our other data."

27 My question was: if you had used part-  
28 diesel and part-steam, I assume this would have resulted  
29 in increased cost. Is my assumption correct?

30 A. Yes, because it would have -- if it





1  
2 didn't result in increased costs, we would have been  
3 rather remiss in continuing to order diesels, because  
4 we made the assumption that the diesels were at  
5 the mature repair level. Under our conditions it would  
6 have resulted in increased costs.

7 Q. The C.P.R. used part steam and part  
8 diesel?

9 A. Yes, but I think they underestimated  
10 their steam repairs.

11 Q. What about the hauling capacity and the  
12 unit cost of the diesel operation as opposed to the  
13 steam operation? I presume the diesel is a more economic  
14 method, more efficient method of hauling grain.

15 A. It is a more efficient method, particularly  
16 in main line operations. Now, on branch lines where  
17 you are running way freights economy is not as great  
18 as it would be on the main line with the manifest and  
19 drag trains.

20 Q. You mention in your evidence:

21 "A field study was conducted to ascertain  
22 "the normal routing of Crow's Nest grain  
23 "between country elevators and destination,  
24 "the kind and frequency of service, and the  
25 "class of power used. Each Division  
26 "Superintendent's office was visited and  
27 "precise information was obtained from the  
28 "Division's Chief Dispatcher. This infor-  
29 "mation was recorded on a form designed for  
30 "this purpose. Chief among the several uses







1 "of this form was the determining of ton-  
2 "miles and car-miles."  
3

4 A. That is correct.

5 Q. Now, if it becomes convenient for  
6 railway management to route grain by other than short  
7 line mileage, if it was convenient -- and I have no  
8 evidence of this -- then I would assume this would  
9 result in increased cost chargeable to grain.

10 A. No, I rather doubt that, because the  
11 Operating Department selects the routing that they  
12 are going to have the grain follow in an attempt to  
13 minimize their operating expenses, and if they chose a  
14 routing which was other than a direct routing on the  
15 Canadian National system, then the reason for this  
16 would be that they would be anticipating lower costs.  
17 So we would reflect these lower costs in the study  
18 as we have done it, and I would think that if we were  
19 to change the routing we would in all probability  
20 increase the cost. In other words, if we were to take  
21 other than the routing that the Operating Department  
22 now uses, I would assume that our costs, if they did  
23 not stay the same, would increase, because the main  
24 job, as you know, is to get the traffic over the road  
25 to the destination in as cheap a fashion as possible.

26 Q. Are you suggesting that in each and every  
27 case what you have described as normal routings are,  
28 in fact, the short mileage routings?

29 A. Actually in most cases they are. My  
30 advice is that they are the short mileage routings,





1 unless there is some other reason, extenuating cir-  
2 cumstances, they would take the short line movement.  
3 I believe in your cross-examination of Mr. Stenason  
4 they had an example where they selected a relatively  
5 longer routing in order to get the train to the line  
6 to take advantage of the larger tonnage trains as  
7 rapidly as possible, but this would be a case where  
8 the Operating Department had chosen to send it by a  
9 slightly longer route.  
10

11 Q. By taking the longer route than the  
12 shortest ---

13 A. You would get an increase in ton-miles.

14 Q. And car-miles?

15 A. Yes.

16 Q. Now, it may be compensated for under  
17 wages and fuel, but under that factor there would be an  
18 increase charged to grain.

19 A. Correct.

20 Q. Then at page 2,200 of the same volume  
21 you say:

22 "As a concession to the shipper, grain may  
23 "be moved to the mill at the local mileage  
24 "rate where this is less than the Crow's Nest  
25 "through rate."

26 I was intrigued with the statement that "As  
27 a concession to the shipper, grain may be moved to  
28 the mill at the local mileage rate where this is less  
29 than the Crow's Nest through rate." How does the  
30 shipper benefit from this? If the local rate is







1 lower than Crow from any point in Manitoba to Winnipeg,  
2 that is no concession by the railway; it is a  
3 published tariff.  
4

5 A. No, the point is -- we will take your  
6 example of somebody shipping from, let's say, relatively  
7 near to Winnipeg and the final destination is going to  
8 be the Lakehead. So they ship their cars and it is  
9 stopped at Winnipeg for milling in transit. Ordinarily  
10 they would pay the statutory rate to the Lakehead.  
11 If, however, the local domestic rate to Winnipeg was  
12 lower than the through rate to the Lakehead, they would  
13 pay the local domestic rate, and it is made up when  
14 the final shipment is sent. Now, that would apply to  
15 a shipper that was located close to the mill, and if he  
16 was located close to a mill but a long distance from  
17 an export position, it is conceivable that the price  
18 he would pay for moving grain to export position would  
19 be higher than the local rate to the mill. So he has  
20 a choice of collecting the local rate, and then when  
21 it is shipped out to the export position the railway  
22 collects the difference between the local rate he has  
23 paid and the through rate which is at statutory level.  
24 So he doesn't in reality have to pay the local rate on  
25 any part of the movement; it is just that he is not  
26 allowed to pay the through rate on any instance.

27 Q. A tariff is not a concession, is it?

28 A. I didn't mean it in that sense of the  
29 word. It is just not always done in that fashion.

30 Q. He has a right to it by published tariff.





1 A. Oh, there is no question to that at all.

2 Q. Now, I notice at page 2217 you were  
3 referring to the total number of all car-days consumed  
4 by Crow's Nest traffic during the year 1958 was 3,547,684.

5 "This total was derived by multiplying the  
6 "car cycle for each grain terminal by the  
7 "total number of cars delivered to the  
8 "terminal."  
9

10 That apparently works out to one trip per 26.8 days  
11 at about 13 trips per year. You have a full utiliza-  
12 tion of box cars in the movement of statutory grain  
13 which results in getting something better than one trip  
14 per month out of your box cars.

15 A. That is correct. The average was 26.8  
16 days, and that included the empty movement as well as  
17 the loaded.

18 Q. And you referred to the cycle, the  
19 car day cycle between Winnipeg and Fort William. My  
20 question is that the inclusion of Vancouver movements  
21 has, in fact, increased the car days charged to grain  
22 moving to Fort William because you have bulked every-  
23 thing together on average.

24 A. Well, if we were pricing the movement to  
25 Fort William alone, we would take the car cycle on  
26 that movement, but taking the average makes no  
27 difference. If you wanted the cost of all the grain  
28 terminating at Fort William, then we would have to take  
29 the Fort William cycle, but taking a weighted average,  
30 it is reflected in its proper proportion.





1  
2 Q. I represent the Province of Manitoba  
3 and I am particularly interested in the movement of  
4 grain to Fort William, and I am suggesting that if  
5 you had costed the movement of grain from Manitoba  
6 points to Fort William as opposed to movements to  
7 Vancouver, the costs would be less from Winnipeg and  
8 Manitoba points to Fort William than from points to  
9 the West Coast.

10 A. I believe their revenue would be a good  
11 deal less also, and I believe -- if you are talking  
12 now about total costs, or are you talking about cost  
13 per ton-mile?

14 Q. I am talking about cost per ton-mile  
15 and variable cost.

16 A. I have no reason to believe, unless I  
17 did a study, that the cost to Fort William would be  
18 lower per ton-mile than it is to Vancouver. I would  
19 have to sit down and study the traffic in that  
20 particular light, and we just haven't done that.

21 Q. There is no question that a 40-day  
22 cycle as opposed to a 24-day cycle would result in an  
23 increased cost.

24 A. You have to look at the length of haul  
25 here.

26 Q. We granted you 200 miles additional  
27 length of haul, and the distance is there.

28 A. I would say that it appears from that  
29 that there would be a higher cost per ton-mile to  
30 Vancouver than to the Lakehead, per ton-mile, but again







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Bandeem, cr-ex  
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2 I have nothing definite to go on and I would have to  
3 run a study.  
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19 (Page 13221 follows.)  
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1  
2 Q. You have not any doubts that you do not  
3 carry as many loaded cars of grain with a single diesel  
4 unit through the mountains as you do from Winnipeg to  
5 Fort William?

6 A. No, you are quite right on that point,  
7 but again, I would, before making a definite statement,  
8 I would want to check it. I think there is the possi-  
9 bility what you say is correct.

10 Q. And the trains move in solid trainloads,  
11 you told us, about 80 per cent, at least, from Fort  
12 William to Winnipeg? Do they move in solid trainloads  
13 to Vancouver?

14 A. No, we have no information on the numbers  
15 that move in what might be called solid grain trains  
16 from Edmonton to Vancouver, but I would assume that it  
17 would be a much smaller percentage of solid grain trains  
18 from Edmonton to Vancouver.

19 MR. FRAWLEY: The train would be heavier,  
20 would it not, heavier from Alberta going west, got  
21 all that oil in it?

22 THE WITNESS: The other thing, I believe  
23 there is some grain sent from Minnesota out to the  
24 west coast as well. It does not all go through the  
25 lakeland. I think there are special grades, and what  
26 not.

27 MR. MAURO: Q. And there is some Alberta  
28 grain that goes to the lakehead?

29 A. Quite right.

30 Q. Page 2232, at the bottom of the page:







"Number of trains by train run: To determine the number of trains by train run related to the study traffic an examination had to be made separately of the number of way freight trains and through freight trains operated in western Canada."

Now, as I understand this procedure, the number of carloads, the number of way freight trains required to handle grain, was computed for each train run as the ratio of total grain car loading to total carloads originated and terminated, multiplied by the total number of way freight trains operated on such run during the year 1958?

A. That is correct.

Q. Now, if from Rapid City to Winnipeg you operated 52 runs per year ---

A. I don't think that is a train run. May I just check and see whether it is or not?

Q. We will give you the train run.

A. I am informed that in that particular case the train run would be just on the Rapid City --- from Neepawa to, is it, Rapid City, ---

Q. There is Haliboro, Beulah, trains 583-584 on that particular run, Mr. Bandeem. If there were 52 runs per year and there were 500 cars of grain and 500 cars of other traffic, you would charge grain with 26 train runs; is that correct?

A. That is correct. There is 500 cars of other traffic terminating and originating, yes.





1  
2 Q. Yet the grain could have been carried  
3 in six trainloads. The 500 cars of grain did not  
4 require 26 train runs to move it?

5 A. You mean in other words you would want us  
6 to take trains in and cars back to have them loaded  
7 and run five trains a year, so that a car might sit in  
8 there for as much as four months while we were waiting  
9 for another train to come along?

10 Q. No. First of all, of course, the grain  
11 can sit, but what I am suggesting to you, it is as  
12 fair a method as your method of allocating train runs  
13 by the total number of carloads of grain as a ratio of  
14 the total carloads and charge grain with 26 train runs  
15 when there were 500 carloads of grain?

16 A. No, I cannot see that that method would  
17 produce any type of reasonable costing. The number of  
18 trains that are run there are determined by the opera-  
19 ting department, and the frequency of service is deter-  
20 mined by the operating department.

21 If we were only to run five trains a year to  
22 collect the grain, then some of the traffic -- you  
23 realize this is less than one train for every two  
24 months, so a car could very easily have to sit there  
25 for sixty days, and the car cycle that we have been  
26 discussing previously would sky-rocket, as would the  
27 cost of investment and all of the things associated  
28 with a car being tied up for two months.

29 Q. Now, on these scheduled runs, Mr.  
30 Bandeem, I discussed with Mr. Stenason and Dr. Edwards





1 the constant or fixed costs that should be associated  
2 with scheduled runs, and both Mr. Stenason and Dr.  
3 Edwards told me that in their opinion they were 100  
4 per cent variable, as you people have submitted in  
5 your study, and I think Dr. Edwards told me that two  
6 or three or four times a year the operating branch of  
7 the railway takes a look at this situation and read-  
8 justs the schedule; is that correct?

9  
10 A. They do it even more often than that,  
11 but they have a formal, I think it is called, change of  
12 card in the spring and in the fall.

13 Q. I have before me here an exhibit of the  
14 Canadian National Railways submitted a few weeks ago  
15 in Brandon on the application for abandonment of the  
16 Rapid City subdivision from Hallboro to Beulah. It is  
17 your exhibit No. 2, and it involved train 583 which  
18 leaves Hallboro at eleven o'clock Wednesday morning  
19 and comes back to Beulah, arrives in Beulah Wednesday  
20 evening. It leaves Beulah Thursday evening and comes  
21 back to Hallboro Thursday evening -- that is 5.40,  
22 must be Thursday morning it arrives back. It is one  
23 way up on Wednesday, comes back on Thursday -- scheduled  
24 run, 104 runs in 1953.

25 MR. FRAWLEY: Maybe it comes back to Beulah  
26 on Saturday.

27 MR. MAURO: On Thursday. Do you want to go  
28 on that?

29 Q. Here are the numbers of the average loaded  
30 cars per train month by month in 1953







1	January	6½ cars per train
2	February	6 cars per train
3	March	6.4 cars per train
4	April	7.5 cars per train
5	May	25.5 cars per train
6	June	25.5 cars per train
7	July	16 cars per train
8	August	4.1 cars per train
9	September	2.5 cars per train
10	October	8.6 cars per train
11	November	9.1 cars per train
12	December	5.7 loaded cars per train

13  
14 or an annual 12-months' average of ten cars per train  
15 on a scheduled run.

16 Now, are you telling this Commission that on  
17 the Hallboro-Beulah run there were no fixed costs, that  
18 those train runs were 100 per cent variable on fuel and  
19 crew wages with the movement of grain?

20 A. Yes, I am, Mr. Mauro. I think that  
21 you must realize that the railway cannot change schedules  
22 from day to day or month to month.

23 Q. Give us the changes in 1953?

24 A. I don't have the changes in 1953 with me.  
25 That would be something that we would have to find for  
26 you. I have a little note on the variability of  
27 trains that may be of benefit to you which sets out  
28 the Canadian National's position in that respect.

29 Q. Before you read that, I will put on the  
30 other one and it is in the same volume.





1 A. I am sorry, I was not able to find the  
2 figures you were giving. I don't know, maybe we have  
3 a different exhibit.

4 Q. It is your exhibit.

5 A. Yes, but maybe I haven't found the one  
6 you are referring to.

7 Q. You can look at it and I will read this  
8 other one in and you can look at it. This is your  
9 Exhibit No. 2 in the application for the abandonment  
10 of the subdivision from Greenway to  
11 Deloraine, carload movement by months, average loaded  
12 cars per train.  
13

14 By the way, this is scheduled train No. 547-  
15 548 and leaves Greenway on Wednesday to Deloraine;  
16 leaves Deloraine on Thursday back to Greenway:

17 January	3 cars per train
18 February	3 cars per train
19 March	1 car per train
20 April	4.5 cars per train
21 May	19 cars per train
22 June	23 cars per train
23 July	5 cars per train
24 August	3 cars per train
25 September	0.9 cars --

26 a really big month, although there were two trains less  
27 per week --

28 October	8 cars per train
29 November	8 cars per train
30 December	4 cars per train







1 -- for an annual average of seven loaded cars per train.  
2 Yet, Mr. Bandeem, you tell us that there are no fixed  
3 charges or constant costs in those train schedules,  
4 but it is 100 per cent for fuel and crew wages to  
5 grain?

6 A. It is variable over time, Mr. Mauro.  
7 We do not say: "Look, last week, you see, they only  
8 had two cars, so therefore we cut off the schedule."

9 THE CHAIRMAN: Mr. Mauro, on those two  
10 abandonments, was there strenuous objection to the  
11 abandonment?

12 MR. MAURO: As a matter of fact, I do not  
13 want to give some of the evidence, but I can say that  
14 the Manitoba Farmers' Union requested as-required  
15 service, and what I was really bringing out, we  
16 heard about these constant adjustments, and I wanted  
17 to know what the constant adjustments were.

18 A. We have a situation in way freights in  
19 the western region of Canadian National, and  
20  
21 a minimum service of one train a week in each direction  
22 on other than transcontinental and secondary main  
23 lines. However, with the advent of better roads in  
24 the west, alternative means of service have been  
25 available to the communities involved and this minimum  
26 service standard is no longer effective.

27 On the variability of trains, the respon-  
28 sibility for the efficient movement of traffic falls  
29 on the operating department. Hence manifest trains,  
30





1 although shown in the schedules of fast freight trains  
2 as operating with a certain frequency, are operated  
3 only when there is sufficient traffic available to  
4 warrant their operation.

5 Q. Could I just interject on that because  
6 it is meaningful to me, that "warrant their operation"  
7 -- that is twice weekly runs?

8 A. That is our way freights, I am sorry.

9 Q. The scheduled runs, are they not?

10 A. But they are way freight trains, not  
11 manifests. I am not sure they are scheduled. I  
12 guess they are.

13 Q. They are scheduled trains, they are  
14 scheduled?

15 A. I am talking of manifest at the moment.

16 It is noted that over the years there  
17 have been quite considerable fluctuations in the opera-  
18 tion of freight trains. On the transcontinental main  
19 line they have varied from one train a day up to two  
20 to four fast freights plus several drags per day. On  
21 the secondary main lines, i.e. Calgary - Edmonton,  
22 Winnipeg - Regina - Moosejaw, Winnipeg - Dauphin -  
23 Humboldt, and Winnipeg - Port Arthur - Duluth, they  
24 have varied from 5 or 6 day a week service up to one  
25 or two fast freights plus drags per day. The  
26 lowest point reached was during the depression of  
27 the 1930's.

28 The growth of trains into a fast freight  
29 category follows a fairly fixed pattern. After the  
30





1  
2 traffic has caused drag freights to be operated with a  
3 certain frequency for a sufficient length of time to  
4 form a consistent pattern, i.e., at least once a day,  
5 at least twice a day, etc. then a fast freight service  
6 is shown.

7 In addition to this, when the volume of mani-  
8 fest carload traffic is sufficient, certain of these  
9 so-called fast freights will be allowed a reduction  
10 in volume per train to permit a better delivery per-  
11 formance.

12 For way freight service, there was until  
13 recent years a minimum service of one train a week in  
14 each direction on other than transcontinental and  
15 secondary main lines. However, with the advent of  
16 better roads in the west, alternative means of service  
17 have been available to the communities involved and  
18 this minimum service standard is no longer effective.

19 The difference between the various types of  
20 trains, speed freight, drag freight, and way freight  
21 (we could add passenger also) is in the length of time  
22 required to change their operation to suit different  
23 traffic conditions. Drag freights have an immediate  
24 adjustment, speed freights and way freights somewhat  
25 slower say up to six months, and passenger trains  
26 considerably longer. In connection with the speed  
27 freights there is often an apparent lag in adjust-  
28 ment that is not real. This is because of the lag  
29 in revising the speed freight schedules issued to  
30 the Traffic Department although the trains are actually







1 operating on a new schedule considerably in advance  
2 of the publication of the schedules.

3 Q. Thank you very much for that, Mr. Bandeem,  
4 and we will go back now to these two matters that  
5 appear in your cost study.

6 A. Yes, I have just been handed a note  
7 saying that the subdivision which you referred  
8 to, of the 730 cars that came out in 1958 and went in,  
9 terminating and originating, 602 of those were grain.

10 Q. Exactly, it is 90 per cent grain?

11 A. And of the 1,079 cars originating or  
12 terminating, 955 of them were grain.

13 Q. I think it was 910 to 955 -- that is  
14 exactly my point.

15 A. You claim these train runs are variable  
16 with grain? Scheduled trains two runs a week, variable  
17 with grain? Why does grain require two runs a week?

18 Q. I am not arguing the point. This is  
19 the point I am making, that where you have scheduled  
20 train runs, instead of being operated on an as-required  
21 basis, my question was, did you have a fixed cost in  
22 there? Grain did not require two runs a week.

23 A. Wait till I ---

24 COMMISSIONER GOBEIL: Mr. Mauro, is there  
25 a direct loss in the cases where service is just as  
26 required?

27 MR. MAURO: As-required service, yes, they  
28 are, Commission Gobeil. We just sort of worked this  
29 out this morning because it was familiar to us with  
30





1  
2 the abandonment in Manitoba, but this is the sort of  
3 thing that arose from my discussion with both Mr.  
4 Stenason and Dr. Edwards, that where they have  
5 scheduled train runs, to suggest that those scheduled  
6 train runs are 100 per cent variable as to fuel and  
7 crew wages with grain -- grain did not require  
8 that those trains run two runs a week to pick up and  
9 get three cars and 0.9 cars.

10 A. Are you indicating that if grain had  
11 not been there we would have still run those trains?

12 Q. I am suggesting to you, Mr. Bandeem,  
13 that for whatever reason management came to the de-  
14 cision that they wanted to operate the train on every  
15 Wednesday to Hallboro and every Thursday to Beulah, and  
16 every Wednesday to Greenway and every Thursday to  
17 Deloraine, is management's decision, but that it was  
18 not required to pick up four or five or six cars of  
19 grain?

20 A. But this is something I am afraid we  
21 have to leave to the operating department and the  
22 management of the railways, and how they best see fit  
23 to pick up the grain.

24 There could be no suggestion, no doubt in  
25 my mind, sir, that any of those trains that are run  
26 are there for any other reason than grain, and I would  
27 say that, if anything, we have been conservative in not  
28 charging the full cost to it, because when some par-  
29 ticular type of traffic makes 155 cars out of 1000,  
30 I do not think there would be no traffic there even if







1 there were no grain.

2 Q. Mr. Bandeem, obviously you have certainly  
3 missed my point in that question. I am not arguing  
4 that the trains were necessary for moving 955 cars and  
5 to the extent of the cost that you might come to the con-  
6 clusion that, it being 90 per cent of the traffic, it  
7 should pay 90 per cent of the cost. What I am sugges-  
8 ting ---

9 A. You agree with that, do you?

10 Q. That your costs are inflated because all  
11 of the scheduled trains were not necessary to move the  
12 study traffic.

13 A. That is a problem that I am afraid I  
14 would not enter into a discussion with you on, because  
15 the operating department is the one that schedules  
16 trains and they decide what is necessary for operating  
17 purposes for the convenience of the shippers to comply  
18 with Orders of the Board of Grain Commissioners and  
19 the other considerations that go into how often a  
20 train is to run.

21 THE CHAIRMAN: How many trains were suggested  
22 on the as-required basis?

23 MR. MAURO: I have no idea, Mr. Chairman.  
24 It may be now that the transcript on those abandonment  
25 applications might be available and it would be ascer-  
26 tainable.

27 COMMISSIONER ANSCOMB: There would have to  
28 be a minimum of other traffic, wouldn't there? You  
29 could not ring up and say: "I want a train to move a  
30 carload of grain."





1  
2 THE CHAIRMAN: We have got to realize you  
3 cannot have your cake and eat it too.

4 MR. MAURO: No, sir; no one is more aware of  
5 that than I am. I just think it is rather important,  
6 when one starts talking about no fixed costs on any  
7 of these scheduled runs, because they will adjust them,  
8 etc., that there are examples where trains have been  
9 operated because the railway comes to the conclusion  
10 that they should operate trains; but I suggest that it  
11 is completely unjust to charge as 100 per cent into  
12 the fuel and crew wages.

13 THE CHAIRMAN: If you have that figure for  
14 maintenance alone on that branchline as given by Mr.  
15 Bandeem this morning, actual charge for maintenance,  
16 the branch line is certainly run at a loss, that par-  
17 ticular one, with that traffic.

18 MR. MAURO: Yes, the loss would be less if  
19 they had less trains operating.

20 THE CHAIRMAN: I see your point.

21 THE WITNESS: I am just a little unclear what  
22 your questioning is. You are questioning here the  
23 ability of the operating department to operate.

24 THE CHAIRMAN: What he is questioning, Mr.  
25 Bandeem, is the railway keeping scheduled trains on.

26 THE WITNESS: I see.  
27  
28  
29  
30





1 Q. Now, Mr. Bandeem ...

2 A. This is an attempt to evaluate it.

3 I assume that for whatever reason they left it in, they  
4 had good and proper reasons for it. However, I am not  
5 in the Operating Department.

6 COMMISSIONER ANSCOMB: Your task is simply  
7 costing?

8 THE WITNESS: Our task is simply to cost  
9 the operation as it occurs, and I assume that the  
10 Operating Department is operating as efficiently as  
11 possible, taking all circumstances into consideration,  
12 and I feel that in Canadian National they are doing  
13 this and I wouldn't be critical of them in the fashion  
14 that Mr. Mauro has until I had knowledge of all the  
15 reasons why.

16 MR. MAURO: Q. That is why this Commission  
17 is here, and my sole purpose is to try and throw some  
18 light on these decisions that the costing experts have  
19 arrived at, that even scheduled trains run at an  
20 expense of 100 variable particularly as to fuel and  
21 crew wages.

22 A. Now, actually, I would say that in  
23 particular cases they should be 110 per cent. But as  
24 to the efficiency of operating trains in these  
25 particular subdivisions, that is a matter that the  
26 Operating Department would have to discuss with you;  
27 and I believe -- and Mr. McDonald can correct me on  
28 this -- there will be an Operating Department witness  
29 later on in the railways' case who would be able to  
30







1  
2 answer that question for you.

3 Q. You are a costing expert; but to the  
4 extent that scheduled trains run and you run one on  
5 grain traffic ...

6 A. It isn't very difficult to study grain  
7 since grain makes up 90 per cent of the total traffic.

8 Q. What if the schedule is for grain  
9 handled by one train every three weeks?

10 A. As soon as you do that, you start  
11 building up your cars, and that goes back to the point  
12 I gave you earlier, that the Operating Department has  
13 to take all facets of the problem into consideration  
14 when they are making their arrangement for operating  
15 their schedules; and if they had enough diesel units --  
16 but the thought of changing your siding lengths, of  
17 changing your car cycle -- it would be just phenomenal;  
18 and I am quite sure that any saving you would get by  
19 operating five or six or twelve trains or one in place  
20 of the number we had would be a very great burden on  
21 the other costs. That is something that the Operating  
22 Department has to evaluate, and to the best of my  
23 knowledge they do it in the best fashion possible.

24 Q. As a matter of fact, Mr. Bandeen, I  
25 disagree that they could operate one train a year.

26 A. Well, I disagree too, but I was taking  
27 your point to its extreme.

28 Q. The point I am making, Mr. Bandeen, is  
29 that to continue as a transportation company and as a  
30 railway company you, of necessity, must offer certain





1 minimal services, and to the extent of offering those  
2 services there is, in fact, a fixed or constant cost  
3 not variable with this study traffic, or any study  
4 traffic.

5 A. I am not that familiar with the statute,  
6 but I certainly have never heard of anything that  
7 requires us to run trains in order to continue as a  
8 transportation company; and I am sure that it would  
9 be the height of futility if we were required to run  
10 a train, say, once a month, so as to prove that we  
11 were still a transportation company.

12 I can't give you any examples, but I think  
13 that there is one of our newer lines in the Maritimes  
14 which didn't pan out as we anticipated and, to the  
15 best of my knowledge, we don't run any trains over it.  
16 As a matter of fact, I don't know that there has ever  
17 been one beyond the inaugural train. We are not  
18 losing money because we have an agreement on it. But  
19 the point is that we haven't felt that we have to run  
20 a train over it once a month.

21 Q. So what you are saying is that frequency  
22 of service on those subdivisions is not necessary and  
23 essential for the movement of the study traffic and  
24 that is why you have charged to study traffic the 100 per  
25 cent of fuel and crew wages.

26 A. I am saying they were charged, at  
27 management's discretion, on the movement of trains and  
28 the schedules, and I would say they are necessary for  
29 the movement of grain.  
30







1  
2 Q. Will you turn to page 2233 of the  
3 transcript? This is on train miles, Mr. Bandeem,  
4 and, just pursuing the method you used, you say:

5 "The total train miles produced by the  
6 "movement of grain being studied were  
7 "obtained by calculating for each train run  
8 "the number of trains in both directions  
9 "multiplied by the train trip miles."

10 For the number of trains that you derived, the number  
11 of trains has been exaggerated, and I would think the  
12 assumption is that the penalty is compounded under the  
13 method used to determine locomotive miles, because you  
14 have, under locomotive miles for each subdivision,  
15 the ratio of diesel freight locomotive miles to diesel  
16 freight train miles for 1958, which was produced from  
17 company records. This ratio was labelled "Train Miles".

18 "The number of trains chargeable to grain  
19 "on each way freight train was multiplied by  
20 "the trip miles to obtain the train miles..."

21 So, therefore, train miles have been exaggerated.

22 A. Yes. If the train miles are overstated,  
23 then the other is also overstated.

24 Q. And also the unit miles per train?

25 A. No, not the unit miles per train. The  
26 unit miles in total might be overstated.

27 Q. Yes; because the unit mile was  
28 multiplied by the number of locomotive miles.

29 A. If you make the assumption that the  
30 train miles are overstated, the others follow.





1  
2 Q. In regard to O.C.S. traffic -- on  
3 company service traffic -- I am reading from page 2240  
4 of the transcript:

5 "To allow for the movement of Company  
6 "materials a percentage increase was applied  
7 "to the grain traffic units being costed.  
8 "This percentage increase was computed from  
9 "the ratio of non-revenue freight net ton-  
10 "miles on the Western Region during 1958 to  
11 "the total revenue freight net ton-miles on  
12 "the Western Region during the same year ..."

13 I understand the percentage applied was  
14 4.445 per cent.

15 A. That is correct.

16 Q. In this case it is our opinion that  
17 you have, again, used the ratio of non-revenue freight  
18 net ton-miles to the total revenue of freight net  
19 ton-miles -- for your percentage -- and I am suggesting  
20 to you that this method again penalizes the heavy  
21 loading equipment, and I would ask you to tell me why  
22 you didn't use either car-miles or gross ton-miles.

23 A. Well, the first point is that I am not  
24 sure it does penalize the heavy loading commodity;  
25 but the reason that we couldn't use this on a car-  
26 miles basis or otherwise is that we just don't have the  
27 data.

28 Q. Would a car-miles basis have resulted in  
29 lower costs against the study traffic?

30 A. Well, it would depend on the car-miles





1  
2 Q. There is no question that there are less  
3 loaded car-miles.

4 A. Let us say the OCS shipment moved on  
5 very light loads; on this we had a very high number  
6 of car loadings; then we would still have a lot  
7 to put against grain, and while your car-miles grain  
8 would get a smaller portion of the total, it could still  
9 be larger than what we have already put it in, in  
10 absolute terms.

11 Q. At page 2252:

12 "Switching of Reciprocal Traffic.

13 "This is the switching involved in the  
14 "interchange of grain and grain products  
15 "traffic by the Canadian National and Canadian  
16 "Pacific at Calgary and Edmonton ..."

17 A. That is correct.

18 Q. Does this switching involve any increased  
19 cost -- this interchange of grain and grain products  
20 by Canadian Pacific and Canadian National at Calgary  
21 and Edmonton?

22 A. Does it involved increased costs?

23 Q. Yes.

24 A. Do you mean by that total traffic?

25 Q. Yes.

26 A. Well, you would have to weigh the  
27 cost of switching against what, in our case, would have  
28 been the choice of taking it all the way up to  
29 Edmonton; and I feel that, no matter how expensive  
30 switching might be, the mere switching of a car at







1  
2 Calgary couldn't begin to be more expensive than having  
3 to take the car all the way from Calgary to Edmonton  
4 and back to Vancouver. So I would say No, the  
5 switching didn't add.

6 Q. Looking at it again, Mr. Bandeem, from  
7 the viewpoint of the movement east and the movement  
8 west, the movement by Canadian National from Manitoba  
9 to the head of the lake doesn't involve any of this  
10 interswitching.

11 A. Not on route, no.

12 Q. So that, in effect, this additional  
13 charge, while it may be a means of ultimate saving  
14 for the Alberta shipper in performing this interchange  
15 with the Canadian Pacific, in fact when you put it into  
16 the average it results in an increased cost for the  
17 Manitoba shipper of grain? It wouldn't be there for  
18 the shipper in Manitoba moving his grain.

19 A. I see your point; and to the best of  
20 my knowledge it wouldn't be there.

21 COMMISSIONER BALCH: Is there any cost  
22 involved in this interchange between Canadian Pacific  
23 and Canadian National?

24 THE WITNESS: At Calgary and Edmonton?

25 COMMISSIONER BALCH: Yes?

26 THE WITNESS: I would have to check on that.

27 MR. STENASON: Not on reciprocal switching  
28 at Calgary and Edmonton. There are charges at other  
29 terminals. I believe there is one at Fort William;  
30 but there is no joint switching arrangement.





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Bandeem, cr-ex  
(Mauro)

1  
2 THE WITNESS: But we have this separate  
3 agreement between the two railways.

4 MR. MAURO: Q. On the same line of  
5 questioning, at 2362A:

6 "Train Enginemen and Trainmen:

7 "Train enginemen and Trainmen wages,

8 "accounts 392 and 401, were computed for

9 "each train run in the Western Region for

10 "both through freight and wayfreight,

11 "separately. Wage rates are on a per mile

12 "basis. This necessitated the calculation

13 "of the constructive miles for each train run."

14 Are there higher wage costs per employee in  
15 the mountain region as compared to the prairie region?

16 A. Yes; that is the running of trains;  
17 I don't think it is on maintenance of way.

18 Q. And in working out your average --  
19 your total cost picture -- you took all the wages  
20 costs ...

21 A. No; we took the wages costs and  
22 applied them to the train miles, but when you average  
23 it out it is still ...

24 Q. It is the .75 mills they are averaged at.

25 A. Yes.

26 Q. They are averaged in there?

27 A. Yes.

28 ---A short recess.  
29  
30







1  
2 Q. At page 2364, Mr. Bandeem:

3 "Train locomotive fuel and power: From  
4 company records of diesel fuel deliveries, of  
5 the miles operated, of work performed and of  
6 time consumed between fuelings for individual  
7 diesel units; the fuel consumption for effort  
8 produced was computed. This was then com-  
9 bined with the known grade and other re-  
10 sistances for each subdivision by direction  
11 to arrive at fuel consumption per car mile  
12 by subdivision and by direction for cars of  
13 different dead and loaded weights. The  
14 fuel consumption per car mile is for the  
15 tons trailing the locomotive only."

16 Now, I notice that where you computed the number of  
17 trains you used the number of cars as the basis, and  
18 yet here you have used the number of tons?

19 A. Well, the fuel consumption varies with  
20 the load that the train has to pull, among other things.  
21 If you will notice, we didn't just use tons as such;  
22 we had a factor in there for the number of cars also.  
23 I don't for an instant pretend to be an engineer and  
24 to understand the problems behind fuel consumption  
25 and what causes fuel consumption, but a certain  
26 amount of it is caused by the number of tons it is  
27 trailing and a certain amount by the friction of the  
28 wheels. What this fuel study produces is a method  
29 of determining the fuel consumption, the length of  
30 train and the weight of the cars; say it is a combination





1 of the total. However, we found it worked extremely  
2 well and a very accurate measurement of the fuel  
3 consumption. We don't have the records in detail  
4 that the Canadian Pacific got for train run; we don't  
5 have similar data. But we built this fuel consumption  
6 formula up on the basis of some special studies. This  
7 wasn't done specially for the Crow's Nest grain study,  
8 it had been used before, and we have since tested  
9 this in areas where there is known fuel consumption  
10 and found it extremely accurate, within one per cent.  
11 It produces the locomotive fuel consumption from the  
12 cars trailing it.

13  
14 Q. You used the words: "The fuel consump-  
15 tion per car mile is for the tons trailing the loco-  
16 motive only." Do you mean tons of freight, or  
17 gross tons?

18 A. It means all tons trailing, and that  
19 is just an expression. I am sorry, it is a little  
20 misleading, but we usually refer to the trailing tons,  
21 and it takes into account the loads and number of  
22 cars.

23 Q. Now, on page 2368 you say:

24 "Lost and damaged freight: The freight  
25 claims, amounting to \$131,610, paid for study  
26 traffic during 1958 was obtained by adjusting  
27 the total grain claims so as to allow for  
28 claims pertaining to domestic grain."

29 I wonder, Mr. Bandeem, how that adjustment  
30 was made between domestic and export grain?





1  
2 A. I am going to have to check the files  
3 before I answer that one. I am informed that the  
4 claims were taken for our Western region and we took  
5 the total number of carloads for statutory grain and  
6 expressed them as a percentage of all the carloads in  
7 the Western region -- I believe it was in the 90's --  
8 and the split was in the same fashion. There was  
9 none of the Central or Maritimes.

10 Q. At page 2369, item 3:

11 "Under exchange switching agreements at the  
12 "lakehead terminals, the Canadian National  
13 "pays the Canadian Pacific a rate of \$1.50 for  
14 "every car of grain and grain products  
15 "spotted for the Canadian National by the  
16 "Canadian Pacific at certain designated  
17 "elevators."

18 My first question is: does the Canadian  
19 National provide similar services for the Canadian  
20 Pacific?

21 A. I think so. Yes, we do. We provide  
22 the same service.

23 Q. Could you point out in your study and  
24 the C.P.R.'s study where the revenues from this item  
25 appear?

26 A. Neither the revenue nor the cost appears  
27 in the study for the C.P.R. shipment. The C.P.R.  
28 probably paid us \$1.50 on these cars for us to  
29 switch them, and if we were to include this we would  
30 include not only the revenue of \$1.50 but also the







1 switching cost involved, and we felt this was one of  
2 the charges that should not be properly included.

3 Q. So in your study you deleted all of the  
4 revenue and costs associated with any switching you did  
5 for the C.P.R.?  
6

7 A. At the Lakehead.

8 MR. STENASON: Yes, that is my understanding,  
9 Mr. Mauro. My switching expert has gone back to  
10 Montreal.

11 MR. SINCLAIR: If there is anything different  
12 we will tell Mr. Mauro.

13 COMMISSIONER BALCH: Is there actual money  
14 passed between the two railways, or is it just a book  
15 entry?

16 MR. STENASON: It is handled through the  
17 joint facility accounting.

18 COMMISSIONER BALCH: They don't give a dollar  
19 and a half.

20 MR. STENASON: They settle out at the end  
21 of the year.

22 MR. MAURO: Q. You are saying here that  
23 the cost of joint facilities incurred by the movement  
24 of grain and grain products at statutory and related  
25 rates was in the amount of \$35,155.

26 A. That is correct.

27 Q. Now, if that doesn't appear in the  
28 study --

29 A. It is the cost to us of getting the grain  
30 to its destination. If we hadn't delivered it to





1 Canadian Pacific to switch into a terminal, we would  
2 have had to switch it into one of our terminals and  
3 we would have had that charged against the grain. We  
4 have a certain amount of revenue from taking the car  
5 to its origin.  
6

7 Q. It is \$1.50 for every car that the C.P.  
8 are switching for you?

9 A. Yes, it is.

10 Q. And you charge this in your study?

11 A. Yes.

12 Q. Is this \$1.50 revenue that the C.P.R.  
13 receives shown in the C.P.R.'s revenue statement?

14 A. No, it is not shown, to the best of my  
15 knowledge, nor the cost involved. They don't show  
16 that, nor the switching minutes which were necessary to  
17 switch it into the elevator, and I think probably this  
18 is saving grain some cost, if you care to look into it.

19 Q. You are charging grain here with \$1.50  
20 per car, and it would seem to me that the C.P.R. would  
21 show in their revenue statement: Received for switching  
22 C.N.R. cars to terminals, \$1.50 per car, at so many  
23 cars.

24 A. And they would show the number of  
25 switch engine minutes and the number of cars involved.  
26 I don't think it is significant in size. The number  
27 of cars involved I don't have immediately with me.  
28 But since the total for these three accounts was only  
29 \$35,000 in 1958, I find it difficult to imagine that  
30 this item would have any great significance.







1  
2 Q. At page 2387, Mr. Bandeem, road property  
3 depreciation.

4 "Depreciation on road property, account 266,  
5 "is compiled on a system basis as the invest-  
6 "ment in plant in the various property  
7 "accounts is recorded on a system basis only  
8 "for the Canadian National. Depreciation  
9 "associated with each property account was  
10 "divided by the expenses for the related  
11 "maintenance of way accounts to produce a  
12 "unit cost per dollar of related maintenance  
13 "of way expenditure."

14 Now, you have related depreciation of main-  
15 tenance expenses with this.

16 A. That is correct. We had no choice  
17 really.

18 Q. Then therefore if there were higher  
19 maintenance expenses in the mountain region, prairie  
20 shippers on the system average basis would be --

21 A. Paying a higher depreciation?

22 Q. Yes.

23 A. Well, I would be willing to -- at least  
24 I would assume that there is a higher investment per  
25 mile of track in the mountain region, and I think the  
26 depreciation would be higher per mile of track.

27 Q. And for maintenance and everything else?

28 A. The maintenance costs?

29 Q. Yes.

30 A. The maintenance costs.





1  
2 Q. If there are variations regionally in  
3 property depreciation, the employment of system  
4 variables does not result in precise figures for the  
5 study traffic.

6 A. Now, let me get this straight. There  
7 is not a variation in the depreciation per cent by  
8 regions. That isn't what your question concerned?

9 Q. No.

10 A. Because, as I understand it, the  
11 per cent depreciation of our property is consistent  
12 across the country.

13 Q. You have larger investments.

14 A. We have no way of measuring this. I was  
15 quite surprised to find out we don't have investments  
16 by region even in the Canadian National, but it is part  
17 of our history, our investment history, that we do not  
18 have the investments broken down by region, and there  
19 is no way we can get it, so I can't answer you whether  
20 the investment is higher in Western Canada than in  
21 Eastern Canada.

22 Q. I assume that there is a heavier invest-  
23 ment in one region than another region. Using the  
24 system basis, which is the only basis you have, would  
25 result in less precise figures.

26 A. Well, actually the way that we did it  
27 was that the investment, the net investment, is related  
28 to maintenance, the variable maintenance cost, so it is  
29 in essence -- the total maintenance cost; and that is  
30 the best way we felt we could allocate the depreciation





1 cost, and I feel quite certain that the investment and  
2 the maintenance costs do bear a relationship. I am  
3 quite happy to admit that this is an area in which we  
4 have had to make an assumption, and I think we have  
5 made the best one we could.  
6

7 Q. Does it include, for instance, the  
8 Montreal yards, investment in the Montreal yards?

9 A. Oh, yes. This is the total road  
10 property investment, is it not? Yes, and that would  
11 include the Montreal yards.

12 Q. None of your non-rail investment appears  
13 in this?

14 A. No.

15 Q. We are not being charged anything for  
16 the Queen Elizabeth Hotel?

17 A. No, I should hope not.

18 Q. Well, you are sure of that?

19 A. Quite sure. The Queen Elizabeth Hotel  
20 doesn't need the support of the freight shippers; it  
21 does quite well by itself.

22 Q. Page 2404:

23 "The cost of money invested was taken to be  
24 "6.5 per cent. This cost is the alternative  
25 "cost of money or the return which should be  
26 "earned if invested in a similar enterprise."

27 What would have been the resultant figure if  
28 6.5 was applied to the balance of the investment?

29 A. If the cost of money was applied to the  
30 total investment figure?







1  
2 Q. Yes.

3 A. You see, what we did with the invest-  
4 ment was to try to determine that portion of the  
5 investment which was variable with the grain traffic,  
6 and when we found this total investment we applied the  
7 6.5 per cent net or 10.96 per cent gross to the invest-  
8 ment which we found variable with grain. I believe  
9 Commissioner Gobeil referred to this yesterday. It is  
10 in Exhibit NR3-9, which I believe is called Exhibit 57ZZ.

11 Q. Page 5 of this Exhibit?

12 A. I believe it is page 6 of the Exhibit,  
13 Mr. Mauro. We show the net investment variable with  
14 the study traffic of \$122,447,367 and we multiplied that,  
15 as you can see, by 10.96; but when you put that back  
16 into a decimal, you move the decimal two places to the  
17 left.

18 Q. You have taken \$122,447,367 multiplied by  
19 that factor and it comes to 13 million odd dollars,  
20 on the assumption that you will receive 6.5 per cent  
21 as the cost of money.

22 A. Yes, net.

23 Q. It is almost 11 per cent overall in order  
24 to return 6.5 per cent?

25 A. Yes.

26 Q. What if you applied the same rate of  
27 return on the balance of the C.N.R. investment? What  
28 would it amount to?

29 A. If we applied the 10.96 per cent on all  
30 of the investments on the Canadian National Railway?





1  
2 Q. Yes. What would you be making in  
3 revenue?

4 A. You mean what would our total revenue be?

5 Q. That is right, to match it up to your  
6 requirements formula and your permissive level of  
7 earnings? I wondered if you used the same yard-  
8 stick.

9 A. Well, we did in arriving at the system  
10 constant costs. I shouldn't say the system constant  
11 cost, I should say the Canadian line constant cost.  
12 In order to determine the constant cost for the system,  
13 we had to estimate the variable cost of freight and  
14 the variable cost of passenger and subtract this from  
15 the total expenses, and in order to do this we had to  
16 evaluate all of the capital invested at 10.96 per cent.

17 Q. I notice from your annual report of  
18 1958 that the total property investment was \$2,980,830,887.

19 A. That is a system figure, of course.  
20 I assume what you read is correct.

21 Q. Well, it is on page 26. That is, less  
22 recorded depreciation, almost \$3 billion.

23 A. Yes.  
24  
25  
26  
27  
28  
29  
30







1  
2 Q. Well, you have applied against the  
3 study traffic \$122½ million as the net investment  
4 variable with the study traffic.

5 A. Now, that investment included not only  
6 property, road property, but also equipment. You will  
7 find it is broken down for you in our exhibit NR3-8  
8 which I believe is 57YY, and you will see that \$33½  
9 million, I think, is investment in freight cars, that  
10 would be the box cars, that is the net investment;  
11 in diesel locomotives we have \$17,284,000; and road  
12 property we have \$68,186,000; work equipment we have  
13 a million and a half and shop and power plants and  
14 machinery we have \$1,860,000.

15 So it is not all road property. It is all  
16 investment. The road property portion is \$68 million.  
17 This is more than road property that you refer to.  
18 It is the property investment including road of  
19 \$2,223,000,000.

20 Q. I am trying to get the equivalent comparison  
21 for the Commission on what would be the revenues of  
22 the Canadian National if they applied what they deem to  
23 be a just and reasonable return for grain at the 10.9  
24 per cent, to the balance of the investment. The  
25 property investment including road equipment and  
26 other physical properties, less depreciation, comes  
27 to \$2,988,000,00.

28 A. That is correct, for the Canadian  
29 National system as a whole.

30 Q. So by applying your same assumed ---





1 A. 10.96 per cent will be applied against  
2 that.

3 Q. Yes, that would come to, we get \$300  
4 million?

5 A. Yes, roughly \$300 million.

6 Q. That would certainly be the happiest  
7 day in the life of the Minister of Finance and Mr.  
8 Gordon and everybody else?

9 A. Before we had this \$300 million as a  
10 profit we would have to pay for our people, the bond-  
11 holders.

12 Q. Yes?

13 A. And that is a fixed cost. Well, I  
14 suppose we could find what it is in the year 1958. I  
15 think it is around \$50 million. Then we would have  
16 to pay the 4 per cent on the preferred stock. We  
17 would end up with a profit that would be considerably  
18 below, as well as income tax.

19 Q. Yes?

20 A. So in other words let us say the fixed  
21 charges were in the order of \$50 million. We would  
22 have less than \$250 million. We would have to pay  
23 50 per cent of that in income tax. We would have  
24 \$125 million, and they would have to pay the preferred  
25 and the common shares.

26 Q. I wondered where you were going to get  
27 this \$300 million from, Mr. Bandeem. I wonder if this  
28 story has been told to the Board of Transport Commis-  
29 sioners and they have given you a permissive level of  
30





1 earnings of \$300 million?

2 A. I wish they would, but they have not as  
3 far as I know.

4 Q. Do you think you could get that out of  
5 the grain shipper? Do you think you could collect,  
6 if the Board of Transport Commissioners permitted you  
7 to raise your rates to return \$300 million, that you  
8 could really go out into the market and get it for  
9 shipping freight in Canada?

10 A. Well, I may say that you have lost the  
11 point of the 10.96. The point is that is the cost of  
12 the capital, whether we are privately or publicly  
13 owned -- and it happens we are publicly owned -- but  
14 this is not a reason that the investment in the  
15 Canadian National should return less than money in-  
16 vested similarly in the rest of the economy and what  
17 we should get is a return of 10.96 per cent.

18 Q. What did you get last year, what was  
19 your return? In order to be fair, we all know what  
20 the returns are and the return would be definitely not  
21 10.96 per cent. Can you tell us what you did in fact  
22 receive last year?

23 A. I believe we received a minus quantity.  
24 This goes a little bit further to the confusion which  
25 seemed to be running yesterday in the discussion with  
26 Dr. Edwards, that what we should have put in here  
27 was the rate of return. You see, in the case of  
28 Canadian National the rate of return was negative.  
29 So the way to get the cost knocked down would be, or  
30







1 course, to run a bigger deficit by that reasoning, and  
2 when we are running a deficit which had one or two  
3 other expenses, there would be no cost by that par-  
4 ticular line of reasoning. So this shows the futility  
5 of using rate of return in costing.  
6

7 Q. In your case?

8 A. Well, in any case, and what we should do  
9 is use a cost of capital concept which is what we did.

10 Q. I see, so if it seems valid to you that  
11 whether you are receiving 10.96 on any single work or  
12 as a total there in 1958, it is completely fair to  
13 charge grain with 10.96 as the mythical optimum that  
14 you require to return 6.5 per cent as the cost of  
15 money.

16 A. Oh, yes, this is definitely grain as  
17 it bears on a portion of the capital costs which are  
18 associated with it.

19 Q. What else is bearing that, Mr. Bandeem?  
20 Why is grain being singled out?

21 A. Well, certain other portions of the  
22 traffic are bearing that. It would be nice if  
23 all of it were, I can grant you.

24 Q. I grant you too, Mr. Bandeem. Now,  
25 Exhibit 57-ZZ is the matter of pensions. As I under-  
26 stand it, Mr. Bandeem, you take the labour expenses  
27 variable with the study traffic being \$16,900,000,  
28 multiply that by the factor of 6 per cent and arrive  
29 at the charge that you have placed against the study  
30 traffic?





1           A. That is correct.       Now, as came out  
2 yesterday, the actual rate of our pension payments  
3 in 1958 to the labour cost was  $9\frac{1}{4}$  per cent. However,  
4 our accounting department when we questioned them  
5 did not feel that this was something that was going to  
6 continue forever. I think they may have been a bit  
7 optimistic on this, but I am not an accountant or an  
8 actuary, so we took their figure on it.

9           However, the difference between this 6 per  
10 cent figure on the labour and what we actually paid  
11 would appear as part of the constant cost.

12           Q. Could you work out for me some figures  
13 here? Perhaps you might jot them down. I am trying  
14 to compare the C.P.R. situation with what you have in  
15 fact accomplished and Dr. Edwards referred to as the  
16 Bandeem refinement.

17           The C.P.R. total traffic expense was  
18 \$12,082,382?

19           A. Which is total traffic expense?

20           Q. Total traffic expense.

21           A. For the system?

22           Q. From DBS, \$12,082,382?

23           A. Yes.

24           Q. And the total general expense, C.P.,  
25 1958, \$34,024,695, for a total of \$46,107,000.

26           Here now during the same year, total traffic  
27 expenses again, DBS, \$13,323,000 and general expenses  
28 \$53,502,000 or a total of traffic and general,  
29 \$66,826,000, compared with \$46,000,000 for C.P.R.  
30







1  
2 Then under the submissions re study traffic,  
3 you have charged study traffic \$665,000 under the  
4 traffic, and general excluding pension, \$806,000, and  
5 pensions, \$1,017,000, or a total of \$2,490,000  
6 chargeable to traffic, general and pensions on the  
7 part of the C.N.R.

8 The Canadian Pacific has charged for those  
9 three items \$4,017,285. Now, remembering that the  
10 total expense, according to DBS, of traffic and general  
11 of the C.P.R. was \$46 million compared to \$66 million  
12 for the C.N.R., the C.P.R. has charged \$4 million  
13 against the study traffic to your \$2½ million. I am  
14 advised that your \$2½ million works out to 3.6 per  
15 cent of the total cost of traffic, general and pensions,  
16 while the C.P.R. works out to 8.7 per cent. Are  
17 those figures ---

18 A. They look to be roughly correct, yes.

19 Q. There is almost, in fact, a 5 per cent  
20 difference between the figures, the resulting factors  
21 that you have used and that of the C.P.R., which would  
22 mean a 5 per cent reduction on the C.P.R.'s method if  
23 they had utilized the same percentage as you did?

24 A. This is 5 per cent reduction on this  
25 particular item of expense.

26 Q. Traffic, general and pensions. Yours  
27 worked out to 3.6 per cent on \$66 million. Theirs  
28 worked out to 8.7 per cent on \$46 million?

29 A. Yes.

30 Q. According to our calculation, against 5





1 per cent reduction of the C.P.R. figure of \$46 million,  
2 would amount to a reduction of about \$2,300,000 as  
3 charged under this item against the study traffic or  
4 \$1,700,000 instead of \$4 million?  
5

6 A. Part of this stems from the fact that the  
7 C.P.R. has a much heavier volume of grain shipments  
8 than we do.

9 Q. What is the percentage of grain?

10 A. To total? I am sorry ---

11 Q. I think it is 155,000 cars with the  
12 C.P.R. to 132,000 on the C.N.R.

13 MR. SINCLAIR: I am surprised at my friend  
14 when he knows that the C.P.R. cars are heavier loading  
15 than that, taken on carloads.

16 MR. MAURO: Are carloads not as good now  
17 for traffic?

18 MR. SINCLAIR: You will get an answer from  
19 the people that know.

20 THE WITNESS: I understand, Mr. Mauro, that  
21 the C.P.R. variable cost of grain to total variable  
22 cost of all freight traffic, their percentage is 15 per  
23 cent and ours is only 8 per cent of the variable cost,  
24 8.7 per cent.

25 MR. MAURO: Q. What about the carloads of  
26 grain handled by the C.N. and the carloads handled by  
27 the C.P.R.?

28 A. It is in the statement somewhere.

29 Q. I think you will find it is 155,000 to  
30 132,000.





1  
2 A. One hundred and thirty-two thousand is a  
3 correct figure for ourselves, and the C.P.R. is 155.  
4 The problem is that there are different ways of  
5 stating carloads than all this milling in transit  
6 traffic, but I think these two figures are comparable,  
7 so they are 20 per cent or so higher than we have.

8 Q. You mentioned this milling in transit  
9 and I would like to get a point clarified. As I under-  
10 stand it, grain shipped from a country elevator to  
11 Winnipeg is charged initially at the lower of the local  
12 domestic rate or the export rate to the lakehead?

13 A. That is my understanding.

14 Q. If the grain is not re-forwarded within  
15 six months, the rate is raised to the domestic level;  
16 did you know that?

17 A. Yes.

18 Q. You know now, and I wanted to know how  
19 this extra revenue was taken into account. I have an  
20 example here from Colonsay to Winnipeg which happens  
21 to be 861 miles, which I think is somewhat representative.  
22 The principal charge based on Fort William, 115,000  
23 pounds minimum at 22 cents, which is Crow rate, is  
24 \$253. Now, if it is not reshipped, if the grain is  
25 not reshipped within six months the charges are convert-  
26 ed to the domestic rate as follows: 115,000 pounds at 52  
27 cents a hundredweight, which is \$607, less charges paid  
28 of \$253 and the additional charge is \$414. I under-  
29 stand the domestic traffic is approximately 5 per cent  
30 of the total?







1  
2 A. You want to know how we accounted for  
3 domestic traffic

4 Q. How you accounted for these additional  
5 charges that do not arise until six months after,  
6 that cannot arise until six months after the grain  
7 is shipped under the Crow rates?

8 A. This is a domestic shipment, not  
9 statutory.

10 Q. It starts out statutory?

11 A. But it ends up domestic.

12 Q. Six months later it is not reshipped.  
13 Therefore you are charged ---

14 A. I will check and see how we accounted  
15 for that. I am informed that we did not include the  
16 original shipment if it was subsequently stepped up,  
17 and this necessitated us going through the records and  
18 finding out if a car originated at a statutory rate  
19 and then was stepped up to domestic, and we would not  
20 include the shipment.

21 Q. But you would not know about some of  
22 those until six months after?

23 A. That is correct. Do I look through  
24 your figures?

25 Q. Can you say when the check was made  
26 six months after your last 1958 shipment?

27 A. It would be in the summer of 1959  
28 anyway. Let me check up this again.

29 COMMISSIONER ANSCOMB: May I just ask on  
30 that point, I cannot understand any man letting it





1 get out of one class into another. It is better  
2 than demurrage. Why would he let it wait six months?

3 MR. MAURO: Because he starts off by saying  
4 it may or may not go into the export trade and takes  
5 the Crow rate into the mill, for example, or into the  
6 elevator, and then he cannot use it for the export  
7 trade. Six months later he sells it locally and  
8 has to pay domestic rates.  
9

10 THE WITNESS: This is just a way to get a  
11 cheap rate for six months.

12 COMMISSIONER GOBEIL: That represents an  
13 important percentage.

14 THE WITNESS: No, I don't imagine the per-  
15 centage of that would be very significant. We did  
16 treat with this problem and we checked it only in  
17 such fashion that none of these carloads would be included  
18 in the present study, either revenue or expense-wise.  
19  
20  
21

22 (Page 13258 follows)  
23  
24  
25  
26  
27  
28  
29  
30







1  
2 THE CHAIRMAN: Mr.Frawley.

3  
4 CROSS-EXAMINATION BY MR. FRAWLEY:

5 Q. Mr. Bandeem, if I understood the  
6 import of your discussion a few minutes ago with Mr.  
7 Mauro you said that you thought you should earn about  
8 \$300 million more. In what respect ...

9 A. No, not \$300 million more. The  
10 question was that our net investment was roughly \$3  
11 billion and Mr. Mauro had asked if we thought we should  
12 earn 10.96 per cent on this investment, which would  
13 give us a net of  $6\frac{1}{2}$  per cent, and I said Yes, that we  
14 should; that it should make no difference --that  
15 we are a government-owned corporation -- on the use  
16 of the capital.

17 I don't want to get into an economic dis-  
18 cussion, but I believe that you would get misallocation  
19 of your capital if you didn't expect the government  
20 investment to earn the same rate as the private  
21 industry, particularly when we are competing with a  
22 railway which is a private concern; and if we were  
23 not expected to earn a return on our investment and  
24 they were, it would be a form of unfair competition.

25 Q. I certainly do not think anybody should  
26 disagree with you there; but let me understand you  
27 here. Your costing procedure was predicated on your  
28 right to earn 10.6 per cent on the net investment  
29 that you allocated to the movement of grain.

30 A. That is correct; we want to earn that





1 gross figure.

2 Q. And the results that you get -- the  
3 variable cost, the constant cost, the deficiency of  
4 revenue and all the rest of it are all worked out after  
5 you had provided for yourself a composite overall rate  
6 of  $6\frac{1}{2}$  per cent.

7 A. That is right; at a net figure of  
8  $6\frac{1}{2}$  per cent.

9 Q. But the 10.6 ...

10 A. 10.96.

11 Q. The 10.96 on the property investment ...

12 A. On all investments.

13 Q. On all investments?

14 A. Yes.

15 Q. On all investments?

16 A. On the net investment. This is the  
17 difference between gross investment less the deprecia-  
18 tion.

19 Q. All the net investment less depreciation  
20 allotted to the grain movement.

21 A. In the whole system.

22 Q. You are being very practical about it  
23 in connection with grain. You say that, having done it,  
24 you work out a certain cost for grain.

25 A. For the capital involved with the grain,  
26 yes.

27 Q. And that it requires a certain rate which  
28 you are not getting now?

29 A. It requires more than we are getting  
30





1 even to meet the variable cost.

2 Q. So why is it not perfectly right and  
3 proper to require the same 10.96 per cent on all of  
4 the property which you have invested to move all of  
5 your freight traffic in Canada?  
6

7 A. We do.

8 Q. But you are not seeking freight rates  
9 based on, and resulting from, the application of this  
10 10.96 per cent.

11 A. But in our costing internally, we have  
12 to put in cost for capital. This is a very real cost.  
13 This is a very real cost -- both the cost of capital  
14 and the depreciation on the capital.

15 This is something that is difficult for a  
16 lot of people to comprehend at first brush with it,  
17 but the cost of depreciation appears in our operating  
18 expenses as an annual cost; and we have to put that  
19 in as a cost on any traffic that is moving.

20 For instance, if our Traffic Department  
21 were to ask us to cost the movement, or any particular  
22 movement, say, from London, Ontario, to Montreal, then  
23 there would be a certain amount of investment involved.  
24 Now, let us say that it was moving in box cars. We  
25 would have a certain number of cars involved and we  
26 would have to calculate the cost of the investment  
27 in the equipment plus the investment in the roadway and  
28 the portion of it that was variable with the traffic.

29 I might add we found a very low percentage  
30 to be variable with traffic. In the case of road







1 property I believe it is only something like 23 per cent  
2 of our total road property was variable with traffic.  
3 The rest of it we considered to be a fixed cost. It  
4 would be in the constant equipment as a charge 100 per  
5 cent variable with traffic. I am talking about box  
6 cars and the diesel units -- locomotives; but this  
7 is costed internally on all of the movements. For  
8 instance, if we were asked to cost for an agreed charge  
9 we would have to put in the cost of the capital  
10 involved and the depreciation on the capital to the  
11 extent that it is variable with the traffic.

12  
13 Q. And in the costing studies you do from  
14 day to day, have you used the figure of 10.96 per cent?

15 A. Well, we use various figures. This  
16 figure is predicated on the existence of our debt and  
17 equity ratio in 1958. It does change from year to  
18 year; and our bond structure changes considerably.  
19 Our most recent issue which was partially at least a  
20 refunding issue cost us 6 per cent; whereas on  
21 older bonds we only pay 3 per cent and 4 per cent; so  
22 it changes from period to period, depending on the  
23 interest rate and also -- primarily on the interest rate  
24 and the type of bond.

25 Q. Mr. Bandeem, I am interested to know  
26 whether or not, in the costing that you do from day to  
27 day for agreed charges, for instance -- the last one you  
28 did -- did you use 10.96 per cent as the rate of  
29 return that you needed and should have and were  
30 entitled to on your property invested in freight traffic?





1  
2 A. We used internally the current interest  
3 rate figure; I believe it is 6 per cent rather  
4 than  $6\frac{1}{2}$  per cent; so the 10.96 would be slightly  
5 lower.

6 Q. But, generally, you used something that  
7 was less than 10.96.

8 A. Yes; that is our current basis. We  
9 used the 6.5 net figure in this study, and I think we  
10 are using internally a 6 per cent figure. I don't  
11 understand the justification for that -- I mean, I  
12 understand it, but I don't have the figure to prove it  
13 to you.

14 I believe our debt ratio has changed since  
15 1958; we have financed to a certain extent.

16 However, this is something that you would need  
17 to ask Mr. Toole, our vice-president of accounting, to  
18 explain.

19 Q. I am anxious to know whether or not  
20 the rates that are arrived at pursuant to the costing  
21 procedures you use -- agreed charges, if you like --  
22 whether they are based on a rate calculated to return  
23 to Canadian National 10.96 per cent on the property it  
24 has invested.

25 A. We use a figure currently internally to  
26 return 6 per cent.

27 Q. 6 per cent rather than 10.96?

28 A. 6 per cent as opposed to the 6.5.

29 Q. What figure do you use as opposed to the  
30 10.96 per cent that you have used in the grain study?







1  
2 A. Well, I presume it would work out at ...

3 THE CHAIRMAN: Around 10 per cent?

4 THE WITNESS: I don't have the figure with  
5 me.

6 MR. FRAWLEY: Q. Just let me see if I  
7 can understand what you are talking about. From time  
8 to time, the Costing Department is asked by the Traffic  
9 Department, as a service to the Traffic Department, to  
10 do a costing job for them.

11 A. Correct.

12 Q. So that they can advise a shipper who  
13 has come to ask, for one reason or another, for the  
14 lowest possible rate he can get.

15 A. To use for rate-making purposes.

16 Q. Well, generally you bargain with the  
17 shipper who, for one reason or another, is endeavouring  
18 to make out a case for a low rate.

19 A. They would want to make sure that they  
20 didn't have a rate which was non-compensatory (a)  
21 because it is illegal, and (b) it would be to our  
22 disadvantage to charge it; so they will ask for  
23 the variable cost which will be a floor.

24 Q. And they come up with the variable cost,  
25 do they?

26 A. We come up with the variable cost.

27 Q. You come up with the variable cost  
28 and deliver it to the Traffic Department?

29 A. Yes.

30 Q. And you stop there?





1  
2 A. Yes.

3 Q. You don't go into full cost in a case  
4 where the Traffic Department asks for an over-night  
5 or over-the-weekend study of what the cost will be?

6 A. That is correct.

7 Q. Now, in finding the variable cost you  
8 say you use a figure which is calculated so that the  
9 rate that is being negotiated will return variable  
10 cost on the basis of something over 10 per cent.

11 A. Well, it is the net return of 6 per  
12 cent, and I think it is around 10 per cent. The reason  
13 I am hesitating is that the tax rates have gone up  
14 since 1958, and I must confess to not having seen the  
15 most recent figure. I have seen it, but I don't  
16 think I remember it.

17 Q. Well, all right; let us say, for  
18 instance, if the rate on petroleum coke from Welland  
19 to Halifax were 39 cents which gives you ton-mile  
20 earnings of .655 cents -- which is published in C.N.R.  
21 tariff 56-4 -- does that return 10 per cent or  
22 something more?

23 A. I am afraid, Mr. Frawley, I never costed  
24 the particular movement. I don't know what it returns.  
25 Where was this from?

26 Q. It is from Welland to Halifax, for  
27 petroleum coke in bags for export.

28 A. I know nothing about the loading  
29 characteristics or the type of equipment it moves in,  
30 or whether it moved at all. I have no idea. Not





1  
2 everything that is in the tariff moves during the year.

3 Q. Well, that may be, but if you move  
4 anything of this nature at all and it isn't costed on  
5 the basis of returning 10 per cent, it wouldn't be  
6 compensatory, I suppose.

7 A. Just taken by itself I would say No.  
8 I don't know whether it is part of a through movement.  
9 I don't know the history of the rate. It may be  
10 that it is partially through movement. I really  
11 don't know.

12 Q. Well, I want to ask you something more  
13 about your rates; but at the moment you are costing  
14 agreed charges in your Traffic Department almost  
15 every day, I suppose.

16 A. Well, there is quite a number of them.  
17 I wouldn't say every day. We are probably working on  
18 one every day.

19 Q. The way agreed charges are going on  
20 you don't, I suppose, get much relief from that  
21 operation.

22 A. There are certain of them that aren't  
23 even referred to us because they would be so above  
24 variable cost that it would be a waste of our time to  
25 look at them.

26 Q. Would you think that iron and steel  
27 plate for export, moving from Hamilton to Halifax, on  
28 C.N.R. tariff 56-4, which returns you a ton-mile  
29 earning of .78 cents per ton-mile -- do you think that  
30 was calculated at 10 per cent return on investment?







1  
2 A. Well, I would say offhand it had a  
3 very good chance of being calculated at 10 per cent  
4 return on investment. It would be heavy loading and  
5 mainline movement. The cost would be quite low on a  
6 ton-mile basis.

7 I don't remember having done it. We would  
8 have to look through the record. But .78 seems as  
9 if it would be returning 10 per cent. I should  
10 imagine the variable cost would be below that and  
11 it would be returning a considerable amount under that.

12 However, this is the danger of looking at  
13 something like that. You can't tell until you have  
14 done a cost study on it.

15 Q. If you only turn up the variable cost  
16 for the Traffic Department when they are negotiating  
17 a rate, why were you so anxious to arrive at total  
18 cost for this movement of export grain?

19 A. Well, as I told Mr. Cumming this  
20 morning, we only submitted it because we realize that  
21 it probably would be of interest to the Commission and  
22 to the people studying the report.

23 Q. Can you tell me -- you probably have  
24 the figures handy there -- can you turn up your  
25 records and give me three or four figures? What was  
26 the ton-mile variable in the case of the Canadian  
27 National?

28 A. You mean the variable cost per ton-mile?

29 Q. Yes.

30 A. I will get the summary. It is .77 cents.





1  
2 Q. What was the constant — the total  
3 cost — the constant, which is another element?

4 A. .3 cents.

5 Q. .3 cents?

6 A. .30.

7 Q. And the total cost?

8 A. 1.07 cents.

9 Q. 1.07 cents?

10 A. This is to be found on page of our  
11 precis.

12 Q. Thank you very much. I thought you  
13 would have them right there. What is your revenue  
14 which would be set down opposite that?

15 A. .48 cents.

16 Q. And the last thing is: What is the  
17 rate that the Canadian National suggests?

18 A. I will have to read Mr. McCoy's precis  
19 on that particular point. I believe that he found a  
20 relationship which would necessitate a 125 per cent  
21 increase in the rate. However, until I find his  
22 evidence ...

23 Q. Well, Mr. Bandeem, just without looking  
24 at it, if it is more than the Canadian Pacific you  
25 couldn't have any more than the Canadian Pacific anyway;  
26 so you would have to settle for the Canadian Pacific  
27 rate.

28 A. In all probability, yes.

29 Q. But isn't that what you do when you go  
30 before the Board for a rate increase? Regardless of







1 the case you make out for need you have to accept it.  
2 That is practical politics -- and I don't emphasize  
3 the word "politics".  
4

5 A. I would agree with you. I have gone  
6 into it often every time we have an agreed charge,  
7 because they came to an agreement on agreed charges,  
8 and we both cost our own movement, and in some cases  
9 ours is higher than the C.P.

10 Q. You have an agreement on agreed charges?

11 A. Yes.

12 Q. You never worry about the Combine s...

13 A. I think they are required by law, so  
14 far as I know, for agreed charges.

15 Q. You are exempt from any criminal  
16 consequences, are you?

17 A. I hope so.

18 Q. Then, the rate would be what, then?  
19 What rate would they be asking for -- 125, or ...

20 A. I don't believe that we asked for a  
21 specific rate.

22 Q. I think it would be good to have that  
23 one more figure.

24 A. On page 4 of an exhibit entitled "Canadian  
25 National Railways' submission to the Royal Commission  
26 dealing with levels of rates for the movement of  
27 export grain in Western Canada which would be just and  
28 reasonable" and in paragraph 10 of that submission we say:

29 "The application of conventional rate-making

30 "principles shows that an increase of 125 per





1 "cent could be made to existing rates without  
2 "disturbing the 1927 commodity-to-class-rate  
3 "relationship."  
4

5 Q. If you have a slide rule, what would it  
6 lift your .48 of a cent to?

7 A. 1.08 cents.

8 Q. Now, just to have all this on the record  
9 in a sort of box score -- because that is what it  
10 looks like -- the variable costs are .77 cents; the  
11 constant costs are .30 cents; the total costs are  
12 1.07 cents; the revenue is .48 cents; and the  
13 rate you are asking for is 1.08 cents; all being on a  
14 ton-mile basis.

15 A. Yes.

16 Q. Having in mind the routine you go through  
17 with your Traffic Department, when the Minister comes  
18 and says he wants a rate to move iron ore from  
19 Schaeferville, say, to wherever it goes, or any other  
20 place, if all you needed to have done was to arrive  
21 at the variable cost and quote the variable cost as  
22 the rate plus some percentage of constant cost which  
23 would take you out of any infraction of Section 334  
24 of the Railway Act, why would you not do so?

25 A. This is precisely what we do. We  
26 set out to do the costing of the Crow's Nest grain  
27 and it passes through the Traffic Department. Mr. McCoy,  
28 I think, was the gentleman most directly involved.  
29 He was given the details and he decided the rate level  
30 which he felt was just and reasonable and he asked us





1 if we would supply him with the variable cost as soon  
2 as we could; so we made an estimate of the variable  
3 cost for them fairly early on, and, as a matter of  
4 fact, I think that the figure we gave to them was  
5 .74 cents. If you remember, when we were on the  
6 stand in December last year we had a considerable  
7 number of changes that we had to put in -- errors we  
8 discovered and refinements which some of your experts  
9 suggested to us -- and the average variable cost, to  
10 the best of my knowledge, at the time that Mr. McCoy  
11 was looking at it was .74 cents. The first estimate  
12 of total cost that we had was .99 cents on per ton  
13 mile; and if he had any figure of total cost it would  
14 be the .99, because we didn't change that until after  
15 the brief had been submitted; so this 1.07 could not  
16 have been available to Mr. McCoy at the time he sub-  
17 mitted his brief.

18  
19  
20  
21  
22  
23  
24  
25  
26 (Page 13273 follows)  
27  
28  
29  
30







1  
2 Q. Well, I will certainly take what you  
3 say. So what you gave Mr. McCoy was just 100 per cent  
4 of the variable costs.

5 A. Yes.

6 Q. And you say at that time it was .74 cents,  
7 and now it is .77 cents.

8 A. That is correct.

9 Q. Now, that being so, what was the  
10 justification for jumping from .77 cents or .74 cents  
11 to 1.08 cents?

12 A. Oh, that is a traffic consideration,  
13 and I am afraid I am not in the Traffic Department and  
14 I don't pretend to be able to make rates in the way  
15 these gentlemen do. I believe what they take into  
16 consideration is the host of things that Dr. Edwards  
17 referred to, the elasticity of demand -- I won't  
18 bother to repeat them.

19 THE CHAIRMAN: We will take a very short  
20 break.

21 ---A short recess.

22  
23 THE CHAIRMAN: Yes, Mr. Frawley?

24 MR. FRAWLEY: Q. Mr. Bandeem, if I under-  
25 stand you correctly, every time your section does a  
26 cost study for the Traffic Department and you use  
27 10 per cent, something over, as the return that you  
28 should have on the property invested, I put it to you  
29 that your total cost would exceed the actual cost which  
30 you show, which are reported in your Annual Report.





1 A. Oh, you are right if you are talking  
2 about operating expenses as they appear in the Annual  
3 Report. But you have to add in -- what this cost of  
4 money is designed to cover is the interest on the  
5 fixed investment, that is the bonds, plus a return  
6 to the stockholder. This is in the case of a private  
7 corporation, and in the case of ourselves. Now,  
8 what this should appear as in the Annual Statement is  
9 a return or a dividend to the Federal Government, but  
10 it won't appear in the Annual Statement because we have  
11 not earned it, and I don't believe last year we even  
12 earned any of the interest on the fixed and bonded  
13 investment. We had a deficit, and I think actually  
14 we had an operating deficit, which means that not only  
15 did we not clear our operating deficit, but we didn't  
16 clear anything towards the fixed investment.

17  
18 MR. McDONALD: The Annual Report is in as  
19 an exhibit, Mr. Chairman.

20 THE WITNESS: So it would not appear in  
21 the annual accounts. What should appear is a statement  
22 showing not only that we have a deficit but we had  
23 no --

24 Q. You don't want it to appear more  
25 astronomical than it does now.

26 A. It is not a cost accounting procedure  
27 to do it.

28 Q. Is it not an unreal calculation in  
29 your case when you are working in a profit of that kind, to  
30 have a return on a property investment which you







1 never earn.

2  
3 A. I don't think it is unreal; I think it  
4 is very real. Any money we have invested in the  
5 Canadian National Railways should have a return to the  
6 person who invested it. Because it is the Federal  
7 Government, it should not make one iota of a difference  
8 whether or not we should make a return on it.

9 Q. When you return a cost to the Traffic  
10 Department at their request and the cost of moving this  
11 traffic is .9 cents per ton-mile, would you say to the  
12 Traffic Department it would be or it is .9 cents after  
13 we have put in something there by way of return on our  
14 invested capital at something over 10 per cent?

15 A. Oh, you have to include the cost of  
16 capital.

17 Q. So when the Traffic Department gets  
18 that figure, there is an element in there that you  
19 haven't earned at all; for years and years you  
20 haven't earned enough to pay the interest on those  
21 investments.

22 A. Where it becomes really important and  
23 essential to put this in is on a developmental line  
24 or the Traffic Department comes along and says that we  
25 have to buy new equipment. If we have to go out and  
26 buy this equipment -- and some of the equipment we will  
27 buy by bonds and some of it we will get from our  
28 depreciation reserve and some of it will come from the  
29 preferred stock which the government buys every year.  
30 We can't look at this as having no cost attached to it.





1  
2 Q. Supposing your experience was that you  
3 earned 8 per cent, would you still use this 6 per cent  
4 that you have become attached to? Supposing you  
5 earned 8 per cent?

6 A. Net. Yes, I would use the 6 per cent  
7 average in costing, because the difference between the  
8 6 per cent and 8 per cent would be in the nature of a  
9 profit above the cost.

10 Q. You wouldn't want that profit?

11 A. We wouldn't want it put in the costing  
12 procedure. It is not part of the cost, it is profit.

13 Q. There is no profit in this cost.

14 A. Not in the economic sense of profit, no.

15 Q. That is all you delivered to the Traffic  
16 Department, the 100 per cent variable cost?

17 A. Yes.

18 Q. And you say "You do what you like with  
19 it; this is 100 per cent variable cost".

20 A. That is correct.

21 Q. And they add to that just as much as they  
22 can or as little as they can, depending on what the  
23 general situation is.

24 A. That is perfectly correct. It is  
25 entirely up to them in what they do in setting rates.  
26 This is entirely within the responsibility of the  
27 company, and they have to use their best judgment and  
28 whatever technique they have available.

29 Q. Now, Mr. Bandeem --

30 A. I just want to point out, if you are





1 talking about variable cost, that we are not very  
2 easily -- if we priced all our movements at variable  
3 cost, in other words, the rate we charged on every  
4 movement in 1958 was just the variable cost and nothing  
5 over it, we would not have made our operating cost,  
6 and included in the variable cost would be the  
7 interest at 10.96 per cent. We still would not have  
8 covered the operating cost. We have to receive a  
9 percentage over the variable cost, even on the operating  
10 cost, let alone the fixed investment cost.

11  
12 Q. So any rate you quoted to the Traffic  
13 Department --

14 A. We don't quote a rate.

15 Q. The cost you quote is sufficient to  
16 enable them to get back their variable cost?

17 A. Yes.

18 Q. And if they used that and nothing else,  
19 of course, you would be --

20 A. We would not even make our operating  
21 expenses.

22 Q. I have a statement here. Would you  
23 look at this statement of rates prepared for me,  
24 Mr. Bandeem?

25 A. Yes.

26 MR. FRAWLEY: I should like to file it as  
27 an exhibit.

28 --- EXHIBIT NO. 145: Statement of Rates.

29  
30 MR. FRAWLEY: This statement, Mr. Chairman,







1 is not too different from the statement filed as  
2 Exhibit 86 and a further corrected revision as statement  
3 86A. As I say, this is not very different from  
4 Exhibit 86, and then there was an Exhibit 86A filed  
5 because Commissioner Mann called our attention to the  
6 fact that we had an Exhibit 86 and we had used figures  
7 net of the Bridge subsidy and net of the Maritime  
8 Freight Rates Act subsidy.  
9

10 Q. Now, I would like you to look at this  
11 document, Mr. Bandeem, and look at some rates, some  
12 low ones and some high ones, and if you would look at  
13 grain, page 9, there is a rate there on grain for  
14 export from Port Arthur to Halifax. Now, I don't  
15 want you to tell me it is a Canadian Pacific rate even  
16 though you might be telling me the truth. It shows  
17 that it is a published rate, but I think you will be  
18 able to answer my questions on that. There is probably  
19 another one that the Canadian National has to move  
20 grain from the Lakehead to Halifax. You will see that  
21 that rate at  $53\frac{1}{2}$  cents returns you .632 of a cent  
22 per ton-mile.

23 A. That is correct.

24 Q. Now, that rate is just as good as  
25 another one, but before I put my question I might put  
26 one or two more. There is a rate on page 11, about  
27 the middle of the page, iron and steel articles moving  
28 from Montreal to Vancouver at \$1.20 under agreed  
29 charge No. 71, and that returns on a ton-mile earning  
30 about 8/10 of a cent, .834 cents. Then on the same





1 page, cast iron pipe moving from Three Rivers to  
2 Vancouver at \$1.10 a 100 under agreed charge 57 returns  
3 .721 cents or a little better than 7/10 of a cent per  
4 ton-mile.

5 Let me ask you this question. That is a  
6 rate which presumably has stood the test of some  
7 costing by your Cost Section, I assume, before it was  
8 published.

9 A. Which? -- the agreed charge rates?

10 Q. Yes. It presumably went through the  
11 mill in your cost section.

12 A. Oh, they would if the Traffic Department  
13 thought there was any question about them being non-  
14 compensatory.

15 Q. Whether it did or not, can you tell me  
16 any good reason why the farmers of Western Canada,  
17 seeking to ship their grain, this basic commodity grain,  
18 which is a raw material in every sense of the word,  
19 is simply cut off the face of the field and simply  
20 sent to the terminal --why the shipper of that commodity  
21 is not entitled to as good a rate as the shipper of  
22 manufactured iron and steel articles moving from  
23 Montreal to Vancouver or a shipper of cast iron pipe  
24 moving from Three Rivers to Vancouver or a shipper of  
25 grain moving from Port Arthur to Halifax? Let me  
26 put another one in, and I will take you to page 10  
27 where you will find a rate there almost at the middle  
28 of the page, zinc bullion moving from Flin Flon to  
29 Quebec City and which returns you 9.53 cents, 9½ mills,  
30







1 and that is published in Canadian National Tariff W460K.  
2 Why is not the farmer in Western Canada, moving this  
3 basic commodity into world trade, not entitled to as  
4 good a rate as the other shippers of commodities I  
5 have just mentioned.  
6

7 A. I don't know what you mean by "as good  
8 a rate". I presume you mean as low a rate.

9 Q. Yes, as low a rate.

10 A. You have to compare what the variable  
11 cost of moving the traffic is. On page 11, the two  
12 that you referred to were iron and steel articles from  
13 Montreal, Quebec, to Vancouver, British Columbia. Now,  
14 that traffic moved 2,878 miles, and the one you referred  
15 to further on down the page is cast iron pipe from  
16 Three Rivers, Quebec, to Vancouver, which moved over  
17 3,000 miles. Now, both of those articles, I presume,  
18 would be fairly heavy loading, and the minimum weights  
19 given are fairly high, and I assume that they would  
20 probably load over that. Grain moves on the average --  
21 I believe it is in the 800's, and in both of these  
22 cases they move over 2,000 miles further than the  
23 average grain movement. They are primarily a main  
24 line movement; they would get all the benefit of the  
25 heavier trains, there would be no way freight trains;  
26 particularly in the Montreal to Vancouver there would  
27 be no way freight trains involved. I don't know about  
28 Three Rivers. However, this would be a through main  
29 line haul for a considerable distance, and I would  
30 imagine you would find the variable cost of this





1 traffic to be considerably lower than the variable  
2 cost -- per ton-mile to be considerably lower than  
3 the variable cost of grain per ton-mile. I would  
4 be very surprised if it wasn't.

5 Q. Look at the grain export rate that I  
6 have asked you to look at on page 9 where it moves  
7 almost 1700 miles from Port Arthur to Halifax, and  
8 all you get out of that is 6/10 of a cent per ton-  
9 mile.

10 A. Well, it is double the grain distance.  
11 We are talking about 800 miles, and this is double.  
12 Before you can measure the degree of goodness or  
13 badness --

14 Q. Just take lowness and highness.

15 COMMISSIONER GOBEIL: You mean you take  
16 for granted that these low rates -- they are not  
17 lower than the variable cost.

18 A. I don't know. When I was giving Mr.  
19 Frawley the reasons why I assumed they were not  
20 probably lower than the variable cost, the reason  
21 is that this is not a way freight movement, it is a  
22 mainline movement. Before I made any reference on  
23 it to the Traffic Department I would cost it.

24 Q. I show you a rate on page 8 on ingots.  
25 It is a 1,300 mile rate, iron and steel ingots,  
26 moving from Hamilton to Sydney. That sounds like  
27 taking coals to Newcastle -- Hamilton to Sydney, for  
28 8/10 of a cent per ton-mile.

29 A. Are we certain that these things are  
30





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(Frawley)

13282

1 moving, Mr. Frawley? I realize there are rates and  
2 tariff costs shown, but on the line --  
3

4 COMMISSIONER MANN: It is an actual  
5 movement.

6 THE WITNESS: Is it an actual movement?  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22

23 (Page 13283 follows.)  
24  
25  
26  
27  
28  
29  
30







1  
2 THE CHAIRMAN: This is an actual movement,  
3 Mr. Bandeem.

4 THE WITNESS: Is it an actual movement you  
5 are recharged?

6 MR. FRAWLEY: Q. Recharged, yes, I should  
7 have noticed that. You do not have any phantom of  
8 recharge, I do not think. They are very real those  
9 things.

10 A. That might be. I would have to study  
11 each one of these to tell you whether it is below its  
12 variable cost or not. I would assume, if there are  
13 agreed charges, that both railways have checked  
14 those out.

15 Q. If you look at page 6, if you look at  
16 the coal moving from Beinfait, Saskatchewan, to  
17 Fort Frances, Ontario, which is 502 miles, all you get  
18 out of that is 6/10ths cent per ton mile.

19 A. I was under the impression, although I am  
20 not that certain, that we were trying something to  
21 rectify coal.

22 MR. MAURO: It is an agreed charge.

23 MR. FRAWLEY: Q. Well, I would not want  
24 you to rectify it on my account. Just leave it away  
25 down there. It is an agreed charge, yes?

26 A. All right.

27 Q. And it is No. 617. You must have put  
28 that in lately. I simply ask you to compare that with  
29 what you are asking the farmers of western Canada to  
30 pay to move their grain to export.





1  
2 A. Before I compare I would have to know  
3 what the variable cost per ton mile is.

4 MR. McDONALD: I think, Mr. Frawley, if I  
5 may make the correction, it is not Mr. Bandeem who is  
6 asking the farmers of western Canada to do anything.  
7 Mr. Bandeem costed the movement of grain and that is  
8 his evidence. He is not a rate man.

9 MR. FRAWLEY: I see, Mr. McDonald is asking  
10 the farmers of western Canada to pay all this extra.

11 MR. McDONALD: We put our approach very  
12 carefully to you. We do not ask. We say this cost  
13 study justifies so much. The rate men say on conven-  
14 tional rate making so much would be justified. We  
15 leave it to the Commission.

16 THE CHAIRMAN: Anyway, no suggestion has been  
17 made by anyone that the farmers pay this.

18 MR. FRAWLEY: Thereby hangs a tale, Mr.  
19 Bandeem. That is why you are asking this high rate,  
20 because you would not -- I was going to use colloquial  
21 language but I will not -- your Traffic Department,  
22 even your hardest traffic men would never ask the  
23 farmers to pay that because they know they could not  
24 pay. Is it not a fact, Mr. Bandeem, that the reason  
25 that these high rates were being asked from the Canadian  
26 shipper in the west is because the Minister of Finance  
27 is going to pay a lot of it?

28 MR. McDONALD: The answer is no.

29 THE WITNESS: I would say definitely no.  
30 I think if you look at domestic grain shipments you will







1 find even if the farmer would be outraged at a single  
2 cent a ton mile, he is already paying considerably  
3 over that for domestic shipments.

4 Q. Let us see how rational you are. When  
5 the Minister of Finance turns you down completely --  
6 first of all, this Commission, if it be turned down  
7 by the Commission or even if you were not turned down  
8 by the Commission you would surely be turned down by  
9 the Governor General-in-Council, do you say Canadian  
10 National would still look to the farmers in western  
11 Canada if they could get the statute to move and ask  
12 for one point something per ton mile to move grain  
13 to the lakehead and Vancouver?

14 MR. McDONALD: That would be a matter for  
15 the rate man.

16 THE WITNESS: My understanding is that the  
17 rate people have considered what the rate should be and  
18 have come up with what they think a just and reasonable  
19 rate is, and I would assume that if the conditions  
20 that you suggest prevail, that this would be what they  
21 would consider to be a just and reasonable rate.

22 MR. FRAWLEY: Q. Well, I say it has all  
23 been considered in that context right from the day  
24 Mr. Gordon went into the box down to Mr. Crump,  
25 it has all been considered in the light of this assis-  
26 tance from the federal government, has it not?

27 A. Well, I really cannot answer this ques-  
28 tion. The traffic people were asked to consider  
29 what would be a just and reasonable rate. They have  
30





1 done that, and I do not know what motivates the minds  
2 of people like Mr. McCoy or Johnston or Gardiner. I  
3 presume that you would have to ask them.

4 THE CHAIRMAN: What you are doing is  
5 costing?

6 THE WITNESS: That is quite right.

7 THE CHAIRMAN: You are doing the arithmetic?

8 THE WITNESS: That is quite right, and they  
9 have to decide on policy, and if the statute were with-  
10 drawn that would be a policy decision of the Canadian  
11 National management.

12 MR. FRAWLEY: Q. Now, Mr. Bandeem, you  
13 say that the Traffic Department sat down and came up  
14 with what they thought would be a just and reasonable  
15 rate. Do you want to leave the impression with the  
16 Commission that they did all that without any regard  
17 whatever to the fact that they were going to have the  
18 federal government enter into it?

19 A. I couldn't even begin to tell you what  
20 motivates the Traffic Department's mind, as I told  
21 you before, and if what you are asking me is were they  
22 aware of the proposed solution, I believe they were  
23 when they made the decision. I don't know for sure.  
24 You would have to ask the gentleman who wrote the  
25 precis, and how much it influenced their decision I  
26 do not know.

27 Q. Mr. Bandeem, I will admit there is a  
28 certain vicariousness about my cross-examination but  
29 I find you a very frank and open witness and that is  
30





1 why I am taking this up with you. It is suggested to  
2 me by my friends from Manitoba that perhaps you are  
3 not just correct when you speak about the farmers in  
4 western Canada paying the domestic grain rate. The  
5 farmer in western Canada gets Fort William or Vancouver  
6 -- he gets the export rate less freight. The receiver  
7 pays the freight rate on domestic grain?

8 A. This is an old argument about who pays  
9 the freight rate, the receiver or the shipper.

10 Q. No, not that one. The farmer delivers  
11 a truckload of grain to the elevator at Lacombe?

12 A. Yes.

13 Q. He gets the Vancouver price less  
14 freight, which is your export price?

15 A. I will take your word for it. I do  
16 not know.

17 Q. Well, Mr. Bandeem, while we have  
18 Exhibit 145 in front of us, would you mind looking at  
19 the other end of the scale and look at page 7 and  
20 you will find the fourth rate is agricultural imple-  
21 ments from North Portal, Saskatchewan, to Edmonton.  
22 On that you get 4-3/4 cents per ton mile for a  
23 movement of 642 miles.

24 The next rate is electrical ranges from  
25 North Portal, Saskatchewan, to Edmonton, the same  
26 mileage, and you get 6½ cents per ton mile on that.

27 Then steel sink cabinets from North Portal  
28 to Edmonton, the same mileage, you get 8.287 cents  
29 per ton mile on that.  
30







1 That is all United States origins coming  
2 across the border and having to pay the full classifi-  
3 cation rate.  
4

5 Now, how much over 100 per cent variable  
6 costs are those rates?

7 A. Well, you see, I believe that is C.P.R.  
8 shipment, is it not? I don't think we could touch  
9 them.

10 Q. I would think that you have not given  
11 over all that very lucrative traffic to the Canadian  
12 Pacific?

13 A. We connect at North Portal.

14 Q. Yes, you see it is CFC which  
15 classification rate. It is not a Canadian Pacific  
16 Railway tariff.

17 A. The first one is Canadian Pacific  
18 Railway tariff.

19 Q. Yes, yours is North Gate, I understand?

20 A. Yes, so I understand.

21 Q. And I am advised by the Manitoba freight  
22 rate expert that it is the same rate from North Gate, as  
23 you might suppose.

24 A. What was the question now?

25 Q. The question was, how much over variable,  
26 how much over full cost, are rates which return you  
27 4 3/4 cents, 6 1/2 cents and 8 2/10ths cents per ton  
28 mile at 642 miles?

29 A. Well, you see, I cannot tell you because  
30 I do not know the costing, but there is certain





1 information given there. You will notice the loads  
2 on the last item you mentioned, the minimum there is  
3 14,000 pounds, which is seven tons, and the others  
4 are ten tons. You have got a very light loading.  
5

6 Q. The minimum charge is light loading,  
7 yes?

8 A. I would be willing to bet there was a  
9 considerable amount of this moved at the minimum,  
10 but the loading is extremely light. I don't know  
11 what the cost would be. I would have to compute it.

12 Q. Here on page 9 there is 40,000 minimum  
13 at the bottom of the page on aluminum and aluminum  
14 articles from Ottawa to Edmonton, 2,000 miles, and  
15 it returns you 4-7/10ths cents per ton mile; agri-  
16 cultural implements from Hamilton to Edmonton, 2,000  
17 miles, again returns you 4.394 cents?

18 A. You see, in making these rates we give  
19 them to variable cost. the traffic department variable  
20 cost, but when they make a rate they take into con-  
21 sideration, particularly in a commodity such as this,  
22 all the things that Dr. Edwards mentioned yesterday and  
23 the day before. They take the elasticity of demand,  
24 ability to pay, market competition. These would all  
25 come into effect, and these rates they set are set in  
26 their best judgment as the rate that is just and  
27 reasonable.

28 I don't know what you mean when you want me  
29 to look at them and say what relation I think is fair  
30 to variable costs. I would say, very offhand, that







1 they are probably one or two times variable costs but  
2 I don't know how much they are.

3 Q. Having worked so thoroughly in the  
4 costing of the grain and costing all kinds of other  
5 movements for the Traffic Department, I would think  
6 you would have a nodding acquaintance with some of  
7 these costs, that is all?

8 A. Can I check that and find out what the  
9 costs are? The point is that I just don't know. We  
10 do not ordinarily express them as a cost per ton mile  
11 in the Traffic Department, and I just frankly cannot  
12 tell you what it would be.

13 Q. I just want to put three more rates on  
14 the record from page 10, Mr. Bandeem.

15 At the top of page 10, there are three rates  
16 there which show pretty substantial rates per ton mile.  
17 There are radios and TV sets, from Toronto to Edmonton  
18 which give you a return per ton mile of 6-8/10ths  
19 cents; space heaters from New Toronto to Edmonton, which  
20 give you a rate of 5.3 cents per ton mile; and aluminum  
21 gas meters from Milton to Edmonton, giving you a return  
22 per ton mile of 6.75 cents.

23 I put it to you, Mr. Bandeem, that those  
24 rates are, of course, the result of what is called  
25 differential pricing or discrimination in the pricing  
26 structure. Of course that is what they are, but I  
27 just put that to you -- that they must be returning you  
28 many times not only variable costs but full costs, with  
29 whatever sort of proper apportionment of constant costs  
30





1 you might want to put against them; and notwithstanding  
2 that you feel that you should ask the grain moving to  
3 export positions in western Canada to pay so much more  
4 than variable costs.

5 I put it to you, Mr. Bandeem, that you would  
6 be perfectly all right and that you should be content to  
7 accept whatever is the proper determination, after  
8 careful scrutiny of the variable costs for moving grain  
9 in western Canada, plus some small amount to satisfy  
10 the requirement of the statute and to make it compen-  
11 satory.

12 A. Well, I do not know how to answer you, Mr.  
13 Frawley. I fail to see the connection that you are  
14 drawing between these rates and what we have to get  
15 for grain. In the case of grain we have suggested  
16 that the rate -- we have not suggested that the rate,  
17 in our precis -- but as you have suggested, we will  
18 probably get the same amount as the Canadian Pacific  
19 Railway which, for convenience, let us say, is one cent  
20 a ton mile and this is above our variable cost, making  
21 it compensatory and it is slightly above variable cost  
22 as you have suggested.

23 Q. Yes, but you do not need to look any  
24 longer at those high rates that are many multiples of  
25 cost. I want you to look at rates which I put to  
26 you, Mr. Bandeem, will only return to you your variable  
27 costs plus some contribution to overhead.

28 COMMISSINER ANSCOMB: Mr. Frawley, I wonder  
29 if I may interrupt with great respect. I do not want  
30





1 to get away from what you have just been asking because  
2 it gets lost so rapidly.

3 You asked the witness a moment ago if he  
4 would be satisfied or why he should not be satisfied  
5 with a variable cost plus something, let us say,  
6 -- that was your language, I think. Would you  
7 tell the Commission what the farmer, what the Wheat  
8 Pool, the growers of grain in western Canada would  
9 accept here?

10  
11 MR. FRAWLEY: I don't know whether the  
12 Dominion government is in this or not.

13 COMMISSIONER ANSCOMB: I did not ask you that.

14 MR. FRAWLEY: I will try and answer your  
15 question.

16 COMMISSIONER ANSCOMB: Were you saying the  
17 farmers and the Wheat Pool would accept what you have  
18 just said?

19 MR. FRAWLEY: I would just like to have it  
20 presented to us. I would like to have something pre-  
21 sented to us other than what we have been asked to  
22 pay, full cost. I would like to know what the re-  
23 action would be if the farmer alone was asked to pay  
24 fully distributed costs, or, when the rate is being  
25 put down against grain, fully distributed costs.

26 COMMISSIONER ANSCOMB: You won't give me  
27 a direct answer.

28 MR. FRAWLEY: In all fairness, sir, I am  
29 speaking for the Alberta Government, and I will answer  
30 as far as I can for the Alberta Government. I will not







1 answer for the Alberta Wheat Pool. I will let them  
2 answer for themselves.

3 Let us have the railways tell us that they  
4 will move grain at the properly determined variable  
5 costs plus some slight contribution to overhead -- just  
6 slight, sir. The way they move castiron pipe from  
7 Hamilton to Vancouver, if I had just that kind of com-  
8 parison, if I had that kind of rate that they give  
9 those people, that they accept for moving castiron  
10 pipe from Three Rivers to Vancouver or iron and steel  
11 articles from Montreal to Vancouver: if they will  
12 offer that kind of rate, I will be very glad to  
13 obtain instructions as to whether it is acceptable.  
14

15 THE WITNESS: You see, Mr. Frawley, they  
16 can very well pay double variable costs. We do not  
17 know what the incidental cost is on this movement.  
18 They could be double variable costs, for all we know.  
19  
20 -  
21  
22  
23 -  
24  
25  
26 -  
27  
28  
29 -  
30





1 MR. FRAWLEY: I think that is all, Mr.  
2 Bandeem. Thank you very much.

3 THE CHAIRMAN: Mr. McDonald?

4 MR. McDONALD: I have no questions.

5  
6 BY COMMISSIONER MANN:

7 Q. Mr. Bandeem, this morning you mentioned,  
8 referring to Exhibit 132, that you were not able to  
9 calculate the demurrage payments, whereas the C.P.R.  
10 has been able so to do. Well, now, since the records  
11 are kept by the joint agency -- the Canadian Car  
12 Demurrage Bureau -- I have a little difficulty in  
13 understanding how that comes about.

14 A. Well, I don't pretend to know how the  
15 C.P.R. got the information, and I notice they aren't  
16 here to tell us.

17 I do know that this particular Bureau you  
18 refer to has told us that they cannot calculate it in  
19 our case -- maybe I shouldn't say "cannot" -- but they  
20 cannot without a great deal of work which they weren't  
21 willing to expend on our behalf.

22 Q. On page 6 of your precis you mention  
23 that in regard to milling in transit you took out  
24 23,000 waybills, and I wanted to know how long did it  
25 take to do so, and how many people were involved in that?

26 A. I would have to . . .

27 Q. You don't need to answer these questions  
28 now. I would like to know because I would like to  
29 compare it with the Board of Transport Commissioners'  
30 one per cent waybill study which, in 1958, constituted







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19,822 waybills.

Thank you very much.

THE CHAIRMAN: Thank you, Mr. Bandeem.

You have been a very responsive and frank witness.

We will adjourn until ten o'clock on  
Monday morning.

---Adjournment.













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